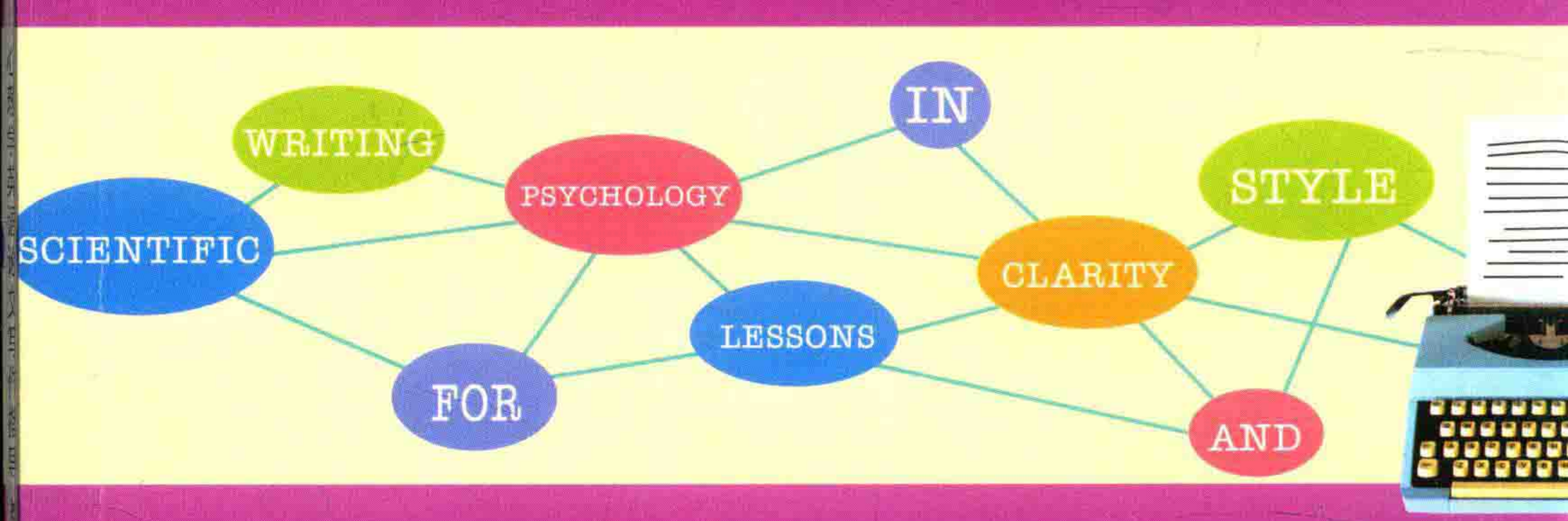
万卷方法

研究方法·基础应用

社科通用

心理学英语论文写作指导

规范表达与简洁文风



罗伯特·凯尔（Robert V. Kail） 著

皮忠玲 等 译

洪建中 审校

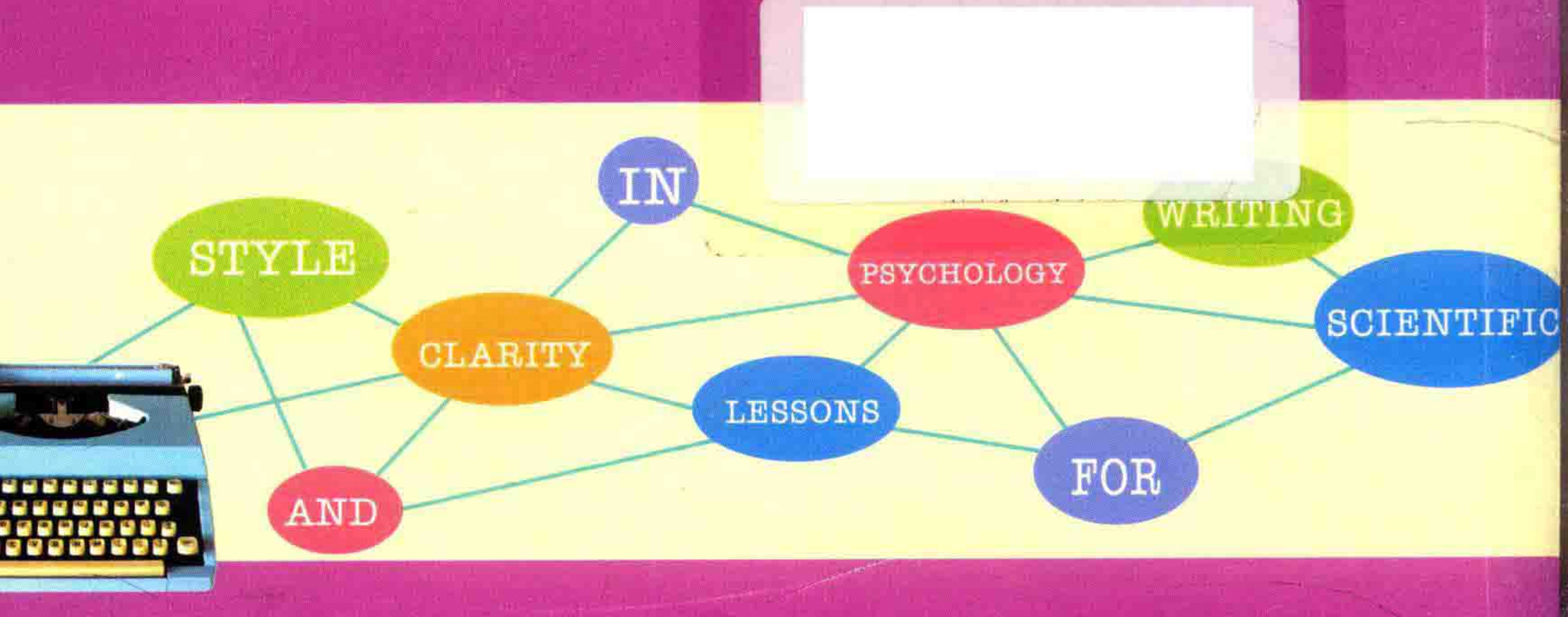




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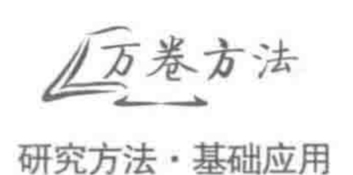
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作者简介



罗伯特·凯尔是普渡大学心理学的著名教授。他于俄亥俄威斯理大学获本科学位，于密歇根大学获博士学位。凯尔的研究领域是儿童与青少年认知发展。凯尔现任英文期刊 *Child Development Perspective* 主编，曾任英文期刊 *Psychological Science* 主编。他曾荣获美国心理学学会颁发的青年科学家奖，并获俄亥俄威斯理大学心理学专业的著名校友荣誉称号。凯尔现为美国心理科学学会会员。

译校者简介

洪建中，芬籍华人，博士，华中师范大学心理学院特聘教授，博士生导师。曾先后在芬兰拉彭兰塔工业大学商学院及创新学院和芬兰赫尔辛基工业大学工业管理学院任职多年（2000—2011）。专业方向：发展心理学；知识管理与合作创新。曾撰写英文专著和发表多篇英文文章 （其中数篇发表在被 SSCI 收录的期刊上）。现教授心理学本科生的《英语论文写作》等课程。

皮忠玲，江西景德镇人，华中师范大学心理学院博士生。专业方向：发展与教育心理学。曾在 *British Journal of Educational Technology* 和 *Innovations in Education and Teaching International* 等被 SSCI 收录的期刊上发表多篇文章。

译者序

每一位科学工作者都需要具备良好的组织和报告研究发现的能力。然而，在我们的学习和工作过程中，往往缺乏相应的训练机会以系统地掌握这种写作技能。本书介绍了从写好一个句子到段落，最后落实到科学论文中具体每个部分的写作技巧，并结合实际写作例子，以帮助我们更好地掌握和运用。

本书作者罗伯特·凯尔教授执教于普渡大学（Purdue University），长期从事心理学写作课的教学工作。凯尔现任英文期刊 *Child Development Perspective* 主编，此前担任过英文期刊 *Psychological Science* 的主编。由于他在教学与研究工作上的杰出贡献，曾荣获美国心理学学会颁发的青年科学家奖，以及俄亥俄威斯理大学心理学专业的著名校友荣誉称号。凯尔现为美国心理科学学会会员。他结合了自己的审稿经验撰写该书，并于 2015 年首次出版。目前该书已被指定为普渡大学本科生心理学写作课的教科书，且深受欢迎。我于 2015 年在华中师范大学上心理学本科生的英语论文写作（高级）课时采用该书为教材。

本书最初是针对心理学专业的学生和研究者，严格遵循和体现 APA（美国心理学协会）写作风格。随着各门学科的迅猛发展，欧美及国内很多学科，特别是很多社会科学学科都采用了 APA 的写作风格，因此，本书所介绍的写作策略和经验同样适合这些学科的学

术论文写作，具有广泛的借鉴和指导作用。

本书较之其他同类写作书特点鲜明。特点之一是在每一讲中使用通俗易懂的句子，并结合实例来阐述写作技巧。特点之二是本书为学生提供了大量已发表的科学论文的例句。特点之三是大量的练习和实战演练可以帮助学生掌握和应用在本书中所学到的知识。

本书由我和我的博士、硕士研究生共同翻译完成。其中，皮忠玲翻译了第1讲，黄凤翻译了第2讲，程雪娇翻译了第3讲与第4讲，李铖翻译了第5讲，皮忠玲和李曼翻译了第6讲，刘登翻译了第7讲，皮忠玲翻译了后记和附录，书中英文例句和练习题及答案由马明丽进行了统一校对。为保证本书翻译质量，译者除了翻译各自的章节外，还进行了互校，为统一名词术语和翻译风格而互相讨论。我参与了全书的翻译工作和讨论，还在实际教学中听取了同学们使用该书的一些意见，最后由我和我的博士生皮忠玲对全书做了统一审校。

力求译著“信、达、雅”是每一位译者的追求，但限于水平，在本书的名词术语和翻译风格上难免有误，希望读者予以指正。

在译稿即将出版之际，感谢原作者凯尔教授和Sage出版社孙素青对该书翻译工作的关心和支持，特别感谢华中师范大学郭永玉教授的鼎力推荐和重庆大学出版社引进了这本教材，感谢责任编辑林佳木、向文平，以及其他为该书出版付出辛勤劳动和努力的人。

洪建中谨识

2016年1月于

华中师范大学桂子山

中文版序

四十多年前，我写了第一本《儿童记忆发展（*The Development of Memory in Children*）》的书。这一经历让我感觉到，能清楚地表达自己的观点，并收到其他读者的积极反馈，是多么令人高兴的事。之后，当这本书第一次被翻译成西班牙语和德语时，让我进一步感受到，当一个人的观点能被使用其他语言的读者看到时，是一件更令人兴奋的事。

我还有一些书被翻译成了日语、韩语、葡萄牙语和俄语，当收到这些译著时，总会让我感到兴奋不已。所以，当我知道洪建中教授和皮忠玲博士把《心理学英语论文写作指导——规范表达与简洁文风（社科通用）（*Scientific Writing for Psychology: Lessons in Clarity and Style*）》这本书翻译成中文时，我感到非常高兴和振奋。我衷心希望这本书的出版，在英语学术论文写作和交流方面，对广大的中国读者会有所帮助。

罗伯特·凯尔

2016 年 5 月 14 日

美国密歇根州安·阿伯市

致 谢

四十多年前，当我第一次走进俄亥俄威斯理大学的实验心理学课堂时，我就被科学写作深深地吸引了。当时，学生需要为自己所做的研究写几份报告。我对我的第一份报告记忆犹新，当时我自认为自己写得近乎完美，但是当我看到老师在报告中用红色的墨迹标注出许多表述啰唆、模糊甚至错误的地方时，我感到非常沮丧。实验心理学课的三位老师，哈里·巴赫瑞克（Harry Bahrick）、哈维·弗里曼（Harvey Freeman）和罗伊·威特林格（Roy Wittlinger）为我的科学写作上了人生的第一课。自此之后，在密歇根大学约翰·哈根（John Hagen）教授和哈罗德·史蒂文森（Harold Stevenson）教授的指导下，我在写作方面得到了更多的训练。感谢这些曾经给予我谆谆教诲并鼓励我将心理学作为毕生事业的人。

很多年之后，我开始撰写一本儿童心理学的教科书，并有了和两位杰出的出版社编辑哈里特·普伦蒂斯（Harriett Prentiss）和苏珊·莫斯（Susan Moss）合作的机会。他们提了很多让我的写作更有吸引力的建议，我对此感激不尽。在此我要特别感谢哈里特编辑让我接触到了约瑟夫 M. 威廉姆斯（Joseph M. Williams, 2000）的写作风格。约瑟夫在写作方面的见解十分具有启发性，对我提出的有效写作技巧具有非常大的帮助。

后来，我有幸成为心理科学领域的权威期刊——心理科学（*Psychological Science*）的主编。在五年的任职期间，我阅读了大约一万份稿件。其中许多稿件都采用直截了当的写作方式，它们对关键信息进行了清晰、简洁的叙述。我很感谢这些作者帮助我认识到了一份优秀的科学报告的基本要素是什么，并把它们作为本书中的例子。

不幸的是，我也阅读过一些水平较低的稿件，它们写得拖泥带水、杂乱无章和晦涩难懂，这些稿件让我有了给心理学研究生开设短期培训课程的想法。我在香港中文大学、科克大学、鲁汶天主教大学、俄亥俄威斯理大学、普渡大学、阿尔伯塔大学、爱丁堡大学、海德堡大学、萨尔茨堡大学以及乌兹伯格大学开设过这个课程，在课程教学的过程中我明白了对于科学写作的初学者，他们最需要的是什么，并让我确信了针对这些课程撰写的有关科学写作的书是多么富有价值。非常感谢我的学生们给我的积极反馈和支持。

另外，还要感谢里德·海丝特（Reid Hester）对这本书的完成自始至终的热情支持，感谢马可·巴斯特（Mark Bast）对文字的润色，感谢莉比·拉尔森（Libby Larson）对出版项目完成的支持。

最后，我要感谢我的妻子迪娅（Dea）长期以来的陪伴。

罗伯特·凯尔

2013年9月10日

前　言

科学心理学家需要好的文笔来报告他们的研究结果，但在他们的成长过程中，通常很少有机会去掌握这项技能。心理学专业的大学生是在研究方法的课程中第一次接触到科学写作，在课堂上他们会写一些研究报告。随后，一些大学生需要撰写毕业论文，研究生需要写硕士论文或博士论文。这些都是很有价值的经历，但是这些经历还不足以让学生们成为一个有经验的写作专家。毕竟，经历太少的运动员们或是音乐家们也只是被看作新手，写出毕业论文才刚刚开始精湛写作旅途的第一步。

本书的目标是帮助你在科学写作方面有所提高。我把科学写作视为一项技巧，这一观点对于这本书有两个启示。第一，在大多数的技巧中，专家们通常懂得“行业技巧”，即策略、秘诀和启发法。这些会使他们的写作显得清晰、简洁，衔接紧密，以及令人叹服。本书将教给你一些专家通常使用的技巧。第二，就像大多数技巧一样，学习如何写好文章需要大量的练习。在许多领域中，10 000 个小时通常被看作是成为一名专家所需的练习量。本书包含的练习题可以锻炼你的写作技巧，为你下次撰写一篇完整的研究报告作准备。

这本书由 7 讲组成：其中，三讲介绍如何写好句子，一讲介绍如何写好段落，还有三讲介绍如何写好一篇研究报告。在每一讲中，

我都介绍了专家们在写有效句子、段落和报告时所使用的技巧。此外，每一讲中包含的练习题可以让你锻炼这些技巧，而且在每一讲最后还有“课后练习”，这一部分可以让你通过阅读和分析已发表论文的优缺点来提高你的写作技巧和能力。

这不是一本仅仅让你阅读的书，它的真正价值在于练习。正如运动员通过练习而不是通过阅读来掌握技能，你需要通过做练习题来提高你的写作能力。说了这么多，心动不如行动[1]。

[1] 遍及整书，我使用了一些缩写形式，因为我想让你们在阅读时感到比较轻松，而不是刻意或很古板地谈论写作。但是在你的科学写作中不要使用缩写，因为多数编辑认为缩写不太正式。

简要目录

目 录

第 1 讲

如何使行文更加清晰

如果你让我描述我今天的午餐情况，我可能会像下面这样写：

(1a) After a return from the site of physical activity, consumption of a sandwich, an apple, and a Diet Coke was accomplished by me.

又或者我可能会这样描述：

(1b) After returning from the gym, I had my usual lunch: a sandwich, an apple, and a Diet Coke.

如果我真像 1a 这样写的话，你可能会认为我很浮夸或者矫揉造作。从描述午餐到撰写研究报告，作者们经常会认为应该避免太直接的写作风格，如 1b，相反他们觉得应该坚持像 1a 的写作风格。

看看下面这两个例句：

(2a) The demonstration of contextual influence on visual perception is the primary contribution of this report.

(2b) Our primary finding is that context influences how people perceive visual stimuli.

我们经常可以在心理学杂志上发表的研究报告中看到像 2a 一

样的句子，从例句中我们可以看到，例句 2b 表达的意思与例句 2a 一样，但是例句 2b 的表达更加直接且易于理解。

相似地，比较例句 3a 和 3b。

(3a) Overestimation of negative reactions to unpleasant outcomes is common because of underestimation of adjustment to those outcomes.

(3b) People often overestimate how negatively they will respond to unpleasant outcomes because they underestimate their ability to adjust to those outcomes.

例句 3a 中的观点模糊不清，而例句 3b 的观点非常清晰。

在这一讲中，将学习如何把句子写得像 1b、2b、3b 一样清晰、简洁和直接，同时如何避免将句子写得像 1a、2a、3a 一样模糊、抽象和隐晦。接下来，首先来看看模糊写作的主要特征，然后学习使行文清晰的策略。

1.1 什么使得一些句子很难读?

例句 1a、2a、3a 是典型的打官腔或学术术语堆砌的写作风格。这样的写作特点是经常会出现动词名词化或形容词名词化。名词化结构的结尾通常是 *-tion*、*-ment*、*-ence* 和 *-ness*。例如，organization、recruitment、prominence 和 brightness 都是从动词（organize、recruit）和形容词（prominent、bright）衍生而来。其他一些在心理学写作中常见的名词化结构见表 1.1。

表 1.1 常见的名词化结构

动　词	名词化结构	形容词	名词化结构
expert	expectation	precise	precision
perform	performance	clear	clarity
evaluate	evaluation	significant	significance
integrate	integration	different	difference

由于名词化结构很难正确表达动词的具体动作或形容词的描述强度，因此它们使得句子看上去很难理解。尤其当名词化结构作为一句话的主语，且后面接着一个很弱的动词时，如 is、are、seems 或者 has，这样一下子就使得句子很难读懂。例句 3a 就是这种写作风格的一个例子："Overestimation ... is ..."

练习 1.1

找出例句 1a、2a、3a 中的名词化结构。

使行文变得清晰的一个关键就是识别名词化，且尽可能将所有名词化结构还原成动词或形容词的形式。因此，去掉不必要的名词化可能是使你的写作更加直接和清晰的最重要的一步。

1.2 撰写清晰且直接的句子的策略

由于"避免名词化"只告诉了你"不要做什么"，而没有告诉你"做什么"，因此，"避免名词化"是一个好的建议，却不是一个令人特别满意的建议。我们回到例句 1a 和 1b（p.1）。由于例句 1a 中包含了名词化结构，使其很难理解，但是例句 1b 并不是仅仅因为避免了使用名词化才易于理解。事实上，例句 1b 能够清晰表达它的意思是由于作者在这个句子中描述了一个人（我）和他的行为（吃午餐）的故事。就像这个句子描述的一样，故事并不复杂，这个故事情节不符合著名导演 Steven Spielberg 对剧本的要求。但是不管怎么样，例句 1b 描绘的故事，比著名作家 J.K. Rowling、John Grisham 和 Nicholas Sparks 写的故事还要好，只因为它关注于故事中主人翁的行为，因此它具有可读性。

讲故事可能看上去与科学写作差别很大，但科学写作通常也像是有个故事要讲。例句 4a 就是一个学术术语堆砌的例子：

（4a）The belief of in-groups is that out-group members are less intelligent and less attractive.

这句话的主语（belief）就是一个名词化结构，它后面接了一个弱动词（is）。这个例句描述的故事非常模糊，大概讲的是一个团队以及他们相信什么样的故事。如果我们把故事的主人翁改成主语，行为改成动词，可以使这个故事清晰很多，如例句 4b：

（4b）In-groups believe that out-group members are less intelligent and less attractive.

例句 5a 和 5b 呈现与上面相同的写作模式：

（5a）Susceptibility to the vanishing-ball illusion seems greater in individuals with ASD.

（5b）Individuals with ASD are more susceptible to the vanishing-ball illusion.

例句 5b 将故事主人翁作为主语，且把名词化结构还原成形容词（susceptibility → susceptible），因此它更容易读懂。

练习 1.2

找出以下句子中的主人翁和动作，然后把它们改成以主人翁为主语、以动词表达动作的句子。

1. Extraction of the gist of a scene is accomplished in a fraction of a second.
2. Counterfactual reasoning was the focus of our research.
3. Disclosure of personal information to friends is less common among East Asians than among Westerners.

目前我们看到的句子都是比较简单的，它们所包含的主语、动词和宾语都不超过一个。然而，在包含从属分句的比较复杂的句子中，作者也要遵守同样的原则，如例句 6a：

（6a）Although skepticism of people who have been misleading previously

is common in older children, trust in others is more frequent in preschool children.

例句 6a 以一个有关大龄儿童的长从属分句作为句子的开头，后面是有关学前儿童的独立分句。这两个从句具有相同的结构，即一个名词化的词组，跟着一个弱名词："skepticism of people... is" 和 "trust in others is"。通过去掉名词化结构可以使句子更加主动和清晰，也就是将 skepticism 替换成 skeptical，名词 trust 替换成动词 trust，如例句 6b：

(6b) Although older children are skeptical of people who have misled them previously, preschool children generally trust others.

例句 7a 更加复杂：

(7a) Given this inability to identify the long-term benefits of a positive family life, the present longitudinal investigation was conducted.

在这个例句中，从属分句有两个名词化结构（inability、benefits），独立分句里有一个名词化结构（investigation）。通过把它们替换成动词和形容词，再增加故事的主人翁，这个句子就变得更加清晰了，如例句 7b：

(7b) Because past research has been unable to determine whether a positive family life is beneficial in the long term, we investigated this issue longitudinally.

当遇到更长、语法更复杂的句子时，这个方法一样奏效。这个方法就是找出名词化结构，用动词或者形容词替换它们，然后为动词加上主人翁。尽管例句 6b 和 7b 相比与例句 6a 和 7a 有所改善，但是它们还不够直接。在下个部分，我们将学习如何把长句子写得更清晰。

练习 1.3

把下面句子中的名词化结构改成动词或形容词，必要时增加主人翁。

1. Interactions with natural elements lead to replenishment of directed-attention processes.
2. Feelings of cleanliness reduce judgments of the severity of others' moral transgressions.
3. A consonantal advantage for accuracy is well established in lexical processing.

1.3 把长句子写清晰

1.3.1 避免使用较长引导从句作为句子的开头

讲得好的故事应该是集中于主人翁与他们的行动，那么好的句子应该是能很快从中找到主人翁，且这些主人翁与他们的行动联系紧密。为了将这一规律转换成我们修改句子的有效工具，我们需要记住主人翁一般是一个句子的主语，他们的行动是用动词和动词的宾语来表达。因此，这样就直接形成了第一个规则：有效的句子应该是很快切入主语，且它们不会用比较长的引导从句作为句子的开头，让读者困惑它们要讲什么。例句 6b 和 7b 就是这样的例子，那些长引导从句使得它们难以理解。如，例句 6b 是有关学前儿童信念的故事，但是读者在读这句话的时候必须从一个有关大龄儿童信念的较长从句入手。相似地，例句 7b 是有关作者的追踪研究，但是作者却在包含对以往文献的较长批判的从句后，才对此作出介绍。我们可以采取以下两个策略来避免使用较长引导从句作为句子的开头。

策略一：如果一个引导从句有 5 个或者 6 个以上的字，就把它写短一点。例如，我们把例句 6b 从句中的 12 个字减少为例句 6c 中的 3 个字。

（6c）Unlike older children, preschool children generally trust people who have misled them previously.

策略二：把句子中较长的引导从句移到句子的末尾，如例句 7c。

(7c) We investigated this issue longitudinally because past research has been unable to determine whether a positive family life is beneficial in the long term.

练习 1.4

通过去掉长的引导从句来修改下面的句子。

1. Because bilingual children have extensive experience selecting one language for production and inhibiting another, their cognitive control surpasses that of monolingual children.
2. Although both white and black individuals experience anxiety during interracial interactions, people can detect such anxiety only in members of their own race.
3. Given findings that prior experience helps infants segment words and that experiences associating objects and shapes help infants know that similarly shaped objects have the same name, we investigated the impact of experience on infants' mastery of syntax.

1.3.2　避免在一个句子中的主语与动词、动词与宾语之间插入不必要的字

第二个规则就是把主语、动词和宾语直接连接起来。主语与动词，或者是动词与宾语之间的不必要的字会弱化故事中关键元素之间的联系。例句 8a 就呈现了这样的问题：

(8a) Some adults, due to attachment anxiety, are skeptical that spouses will support them in times of need.

这个故事是有关一些成年人在需要帮助的时候，他们会怀疑配偶是否会帮自己。在这个句子中，主人翁 adults 是这个句子的主语，行动是 are skeptical，是一个动词词组。但是作者在主语与动词之间插入了 due to attachment anxiety，这样使得这个句子很乱。第一，它分开了主人翁与行动。第二，它把现象本身（成年人怀疑他们的配偶是否会给予他们支持）与它的原因（一些成年人具有依恋焦虑）

混在一起。幸好这个问题很好修改，如例句 8b。

(8b) Due to attachment anxiety, some adults are skeptical that spouses will support them in times of need.

由于 Due to attachment anxiety 只有四个字，所以它作为引导从句是可以的。同时，把它从独立从句中移出来，以加强主语与动词之间的联系。

在动词与宾语之间插入词组会起到分裂句子的消极作用，如例句 9a：

(9a) Experiencing power enhances, across diverse cultures, people's satisfaction with their friendships, romantic relationships, and jobs.

这个句子讲述的故事是权利对生活满意度的影响，但它被 across diverse cultures 这个词组分裂了。我们同样把这个词组移到这个句子的开头来解决这个问题，如例句 9b：

(9b) Across diverse cultures, experiencing power enhances people's satisfaction with their friendships, romantic relationships, and jobs.

练习 1.5

修改以下被分裂的句子。

1. The size and orientation of an object affect, via pathways in visual and motor cortex, how people grasp it.
2. Unconscious thinking, for a range of problems, leads to better solutions.
3. People are quite skilled, despite remembering exact pitch inaccurately, at remembering patterns of changes in pitches.

1.3.3 避免句子无规则延伸

有时候长句子不清晰是因为它们在不断无规则延伸。尽管句子中的主语、动词和宾语连接得很好，但是句子一直延续下去。一个从句叠在另一个从句上，就好像作者在写作时，一直在增加新的观

点。例句 10a 就呈现了这种无规则延伸：

(10a) People describe recent events concretely but distant events abstractly, which is analogous to the description given near and far objects, although individuals with depression are prone to abstract descriptions regardless of spatial or temporal distance.

这个句子以人们描述近期事件和远期事件之间的差异为开始，这样是挺好的。但是句子的后半部分不好：一个从句阐述了时间和空间的相似性，另一个从句阐述了当人们抑郁时又是如何描述时间和空间的。这样拖沓冗长的句子增加了读者理解句子时的困难。

避免句子无规则延伸的第一步就是牢记故事的主要情节，删掉没有作用的文字。在例句 10a 中，抑郁与如何描述事件是无关紧要的部分，因此删除这一无关从句：

(10b) People describe recent events concretely but distant events abstractly, which is analogous to the description given near and far objects.

例句 10b 已经好一些了，但是还可以继续改进。要想知道怎么改进，我们需要看一些语法的细节。第一，以 which 开头的从句是非限制性的从句[1]。它不是一个句子的重要成分；如果以 abstractly 作为例句 10b 的结尾，这个句子就是完整的。事实上，非限制性从句加了一些有用信息，但不是句子必需的。相比之下，在“The description that came first was concrete”中“that came first”是一个限制性的从句，因为它告诉了读者哪些描述是具体的（如，the one that came first）。

第二，非限制性从句经常以 which 开头。它是一个代词，需要先行词。像 10b 的句子，先行词通常是很模糊的。Which 可以是主句中的任何一个词或者词组，又或者是整个从句。读者必须自己找

[1] 定语从句分为限制性和非限制性两种。限制性定语从句是先行词不可缺少的部分，去掉它主句意思往往不明确；非限制性定语从句是先行词的附加说明，去掉了也不会影响主句的意思，它与主句之间通常用逗号分开，将非限定性定语从句放在句子中间，其前后都需要用逗号隔开。—译者注

出先行词，这一过程会耽误他们立刻领会句子的意思。

通常 which 是作为一个标记，这种句子一般是以非限制性从句作为结尾，这样会使句子很拖沓。有个诀窍就是把 which 替换成一个字或词组，这样就可以呈现出主句与非限制性从句之间的联系。

(11a) Some hints about the impact of emotion on perception come from research on the attentional-blink paradigm, which shows that people identify emotionally significant words faster than neutral words.

在这个句子中，以 which 开头的从句是非限制性的，你需要读完这个从句，才知道 which 的先行词是 research。我们可以用主句当中一个关键的名词作为概括的修饰语来替换 which。在句子 11a 中，从句是用来修饰 research 的，因此可以将 which 替换成 research，如例句 11b：

(11b) Some hints about the impact of emotion on perception come from research on the attentional-blink paradigm, research showing that people identify emotionally significant words faster than neutral words.

在 11b 中，分句以 research 为开头，可以让读者避免混淆了 which 所指代的东西。换句话说就是，重复的名词（research）引导了这个从句，告诉读者它们想阐述什么。在这个过程中，重复的名词避免了看似没有方向的无规则延伸的句子。

例句 12a 和 12b 分别呈现了以 which 开头的从句的缺陷，以及概括性修饰语的好处。

(12a) Most prior studies of developmental change in processing speed have relied on samples of children living in the United States and Europe, which may bias conclusions about the shape of developmental functions.

(12b) Most prior studies of developmental change in processing speed have relied on samples of children living in the United States and Europe, samples that may bias conclusions about the shape of

developmental functions.

在例句 12b 中，我把 which 替换成了 samples。这样修改之后，读者马上就知道了非限制性从句的主题是什么，这个句子也不再是无规则的延伸了。

有时候非限制性从句的主题不是那么容易从主句中可以找到，以用来替换 which。这种情况下，我们就要使用一个字或者一个词组来概括主句中相应的部分。

(13a) Women who expect to encounter sexism are particularly attentive to words that are demeaning to females, which supports claims made by Allport (1954) more than 50 years ago.

例句 13a 中，非限制性从句用来指主句中描述的结果；主句中没有名词可以用来替换 which。然而，我们可以用 a result、a finding、an outcome 或一些类似的词来概括主句：

(13b) Women who expect to encounter sexism are particularly attentive to words that are demeaning to females, a finding that supports claims made by Allport (1954) more than 50 years ago.

总结性的修饰语与概括性的修饰语起着同一个作用：它们以一个具体的名词或词组代替了一个模糊的代词。在这一过程中，总结性的修饰语让这个句子具有方向性。

例句 14a 和 14b 是另外一个例子：

(14a) When people feel grateful to another person, they are more likely to reciprocate a favor, which tends to strengthen interpersonal relationships.

在这种情况下，which 是指互相帮忙这一行为，它可以用一个行为或行动代替，如例句 14b：

(14b) When people feel grateful to another person, they are more likely to reciprocate a favor, a behavior that tends to strengthen interpersonal relationships.

练习 1.6

使用概括性或总结性修饰语来修改句子拖沓的问题。

1. Male infants are more likely than female infants to recognize a familiar stimulus in a novel orientation, which is consistent with research showing that males excel at spatial tasks.
2. We tested participants on counting span, operation span, and reading span tasks, which are used to estimate working memory capacity.
3. Compared with high school students of the 1970s, today's high school students believe themselves to be more intelligent, which is further evidence for a trend of greater self-esteem in today's high school students.

句子的无规则延伸不能完全归咎于以 which 开头的非限制性从句。有时当作者在作比较或者列举时，也会使得句子变得无规则延伸。例句 15a 就呈现了在作比较时表现出的无规则延伸：

(15a) Students with this paradigm typically find that people view members of their own group as friendly and kind but that out-group members are perceived to be hostile.

例句 16a 呈现了在列举时表现出的无规则延伸：

(16a) Motor vehicle accidents are a leading cause of deaths among adolescents because adolescents often exceed speed limits, driving is often done in conjunction with drinking alcohol, and seat belts are used rarely.

避免例句 15a 和 16a 中这种无规则延伸的一个好办法就是，形成平行的结构，也就是所有的句子以同样的方式表达所有要素，此外使用同样的语法结构。例如，例句 15a 中的对比是完全不连续的：

◇在描述第一个比较的对象时采用的是主动语态（people ... view members of their own group），而在描述第二个比较的对象时采用的是被动语态（out-group members are perceived）；

◇ 在描述第一个比较的对象时使用的是全称（members of their

own group），而在描述第二个比较的对象时采用的是缩写形式（out-group members）；

◇ 在描述第一个比较的对象时涉及了两个特征（friendly, kind），而在描述第二个比较的对象时只涉及了一个（hostile）。

以同样的词语来表达它们，可以整合所有的对比。我们得到的句子虽然没有例句 15a 简短，但是可以避免句子的无规则延伸。

(15b) Studies with this paradigm typically find that people view in-group members as friendly and kind but that they perceive out-group members as hostile and stingy.

例句 15b 很容易读懂，因为这个句子使用平行结构进行对比：使用了主动语态，并且以简短的词组来表示不同的群体，特征的数量也一样。

我们可以通过删除 that they perceive 来缩短句子：

(15c) Studies with this paradigm typically find that people view in-group members as friendly and kind but out-group members as hostile and stingy.

如果你真的有篇幅限制的压力，那为什么不使用一个特征词来形容每个组呢？

(15d) Studies with this paradigm typically find that people view in-group members as friendly but out-group members as hostile.

我们可以用平行结构使例句 16a 更加通顺和简洁。这个句子当中的诀窍就是把所有的特征（speeding、drinking、not wearing seatbelts）都用来形容青少年司机：

(16b) Motor vehicle accidents are a leading cause of deaths among adolescents because adolescents often drive too fast, while drunk, and without wearing seatbelts.

有时候无规则延伸的句子不能用我之前提到过的策略来改进。在这种情况下，不妨将一个很长又无规则延伸的句子改成两个简短的句子。

（17a）Risk-taking behavior is often thought to be a stable, pervasive personality trait, but recent research suggests that it is specific to particular domains, such as sports, gambling, or investment, which explains why sky divers and bungee jumpers do not frequent casinos or play the stock market.

用 a result that 这个总结性的修饰语来替换 which，虽然这样做可以减少这个句子的无规则延伸，但还是很长：

（17b）Risk-taking behavior is often thought to be a stable, pervasive personality trait, but recent research suggests that it is specific to particular domains, such as sports, gambling, or investment, a result that explains why sky divers and bungee jumpers do not frequent casinos or play the stock market.

所以这时候可以把 17b 改成两个句子：

（17c）Risk-taking behavior is often thought to be a stable, pervasive personality trait, but recent research suggests that it is specific to particular domains, such as sports, gambling, or investment. This result explains why sky divers and bungee jumpers do not frequent casinos or play the stock market.

当你这样做的时候，可以考虑使用分号来分开句子：

（17d）Risk-taking behavior is often thought to be a stable, pervasive personality trait, but recent research suggests that it is specific to particular domains, such as sports, gambling, or investment; this result explains why sky divers and bungee jumpers do not frequent casinos or play the stock market.

分号是一个很巧妙的符号，可以让读者了解到这两个独立的句子是从属于同一个部分。

练习 1.7

通过形成平行结构或写成两个句子来减少这些句子的拖沓。

1. Among PhD-level scientists, those with greater SAT scores have more publications in scientific journals, and SAT score is positively

correlated with the number of patents awarded.

2. For individuals who have approach goals in relationships, the number of positive features in the relationship predicts satisfaction with the relationship; when people have avoidance goals, relationship satisfaction is correlated with the absence of negative features in the relationship.
3. Research on the psychological correlates of human longevity shows that people with greater IQ scores tend to live longer, that greater conscientiousness is associated positively with longevity, and that the correlation between frequency of illness in childhood and age at death is negative.

小结

1. 找出名词化结构，用动词或者形容词替换它们，然后为动词加上主人翁。
2. 快速切入主语，避免较长的引导子句，不要在主语、动词与宾语之间插入其他不必要的词。
3. 以总结性和概括性的修饰语作为非限制性从句的开头，以及使用平行结构来比较和列举，以避免句子的无规则延伸。

课后练习

1. 选一篇文章，找出这篇文章中所有名词化结构，并用动词或形容词来替换它们。
2. 找出一些长的引导从句，试着精简或删除它们。
3. 找一些以“which”开头的非限制性从句，使用总结性的修饰语与概括性的修饰语来修改这些句子。

练习答案

练习 1.1（见句中的斜体部分）

(1a) After a *return* from the site of physical *activity*, *consumption* of a sandwich, an apple, and a Diet Coke was accomplished by me.

(2a) The *demonstration* of contextual *influence* on visual *perception* is the

primary *contribution* of this *report*.

(3a) *Overestimation* of negative *reactions* to unpleasant outcomes is common because of *underestimation* of *adjustment* to those outcomes.

练习 1.2

1. character = people; action = extracting the gist of a scene

People extract the gist of a scene in a fraction of a second[1].

2. character = our research; action = focus

Our research focused on counterfactual reasoning.

3. character = East Asians and Westerners; action = disclosing personal information

East Asians disclose personal information to friends less often than Westerners do.

练习 1.3

1. Interacting with natural replenishes directed-attention processes. OR

When people interact with nature, their directed-attention processes are replenished.

2. When people feel clean, they judge others' moral transgressions less severely. OR

People who feel clean judge others' moral transgressions less severely.

3. When processing lexical information, people are more accurate on consonants than vowels. OR

People process consonants in lexical information more accurately than they process the vowels.

练习 1.4

1. Bilingual children have greater cognitive control than monolingual children because bilingual children have extensive experience selecting one language for production and inhibiting another. OR

Compared with monolingual children, bilingual children have greater cognitive control because they have extensive experience selecting one language for production and inhibiting another.

2. During interracial interactions, white and black individuals experience

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[1] 这本书当中提供的答案，只是其中的一种可能答案。因此，如果你的答案跟我提供的答案并不是完全一致，请不要认为你的就是错的，也许你的答案比我的还要好。

anxiety but detect it only in members of their own race. OR

Black and white individuals experience anxiety during interracial interactions but detect such anxiety only in members of their own race.

3. Given that experience helps infants learn words, we investigated the impact of experience on infants' mastery of syntax. OR

We investigated the impact of experience on infants' mastery of syntax because prior work shows that experience helps infants segment words and associate names and shapes.

练习 1.5

1. Via pathways in visual and motor cortex, the size and orientation of an object affect how people grasp it. OR

Pathways in visual and motor cortex convey information about the size and orientation of an object that affects how people grasp the object.

2. For a range of problems, unconscious thinking leads to better solutions. OR

Unconscious thinking leads to better solutions for a range of problems.

3. Although people remember exact pitch inaccurately, they are quite skilled at remembering patterns of changes in pitches. OR

People forget pitches, but they remember patterns of changes in pitches.

练习 1.6

1. Male infants are more likely than female infants to recognize a familiar stimulus in a novel orientation, a result consistent with research showing that males excel at spatial tasks. OR

... novel orientation, a finding consistent with research showing ...

2. We tested participants on counting span, operation span, and reading span tasks, tasks used to estimate working memory capacity. OR

... reading span tasks, measures used to estimate ...

3. Compared with high school students of the 1970s, today's high school students believe themselves to be more intelligent, an outcome that represents further evidence for a trend of greater self-esteem in today's high school students. OR

... more intelligent, an observation that represents ...

练习 1.7

1. Among PhD-level scientists, those with greater SAT scores have more

publications in scientific journals and more patents. OR

Among PhD-level scientists, greater SAT scores are correlated positively with more publications in scientific journals and more patents.

2. For individuals who have approach goals in relationships, the number of positive features in the relationship predicts satisfaction with the relationship; for individuals who have avoidance goals, the absence of negative features in the relationship predicts satisfaction. OR

Relationship satisfaction is predicted by the number of positive features in the relationship for people who have approach goals but by the absence of negative features for people who have avoidance goals.

3. Research on the psychological correlates of human longevity shows that people who live longer tend to have greater IQ scores, to be more conscientious, and to have been ill less often during childhood. OR

Research on human longevity shows that it tends to be correlated positively with IQ scores, with conscientious, and with good health during childhood.

第 2 讲

如何强调

论文写作过程中，我们常常希望强调某一部分的内容，比如一个创新性的想法、实验程序中重要的一步或者一个关键的结果。新手作者有时通过使用斜体或加粗字体突出强调的内容。然而，有时候连作者自己都不得不承认倾斜或加粗个别字词不一定能表达其想强调的信息。这一讲中，我们将介绍两种更有效的方法，即通过词汇的选择和句子结构的调整，来表达强调。

2.1 通过词汇的选择来表达强调

作者可以通过所使用的词汇强调文中的特定内容。看看下面两个例句，这两个例句除了斜体部分使用的词汇不一样外，句子意思完全一样：

(1a) The finding that parents *often* report greater happiness and greater life satisfaction than nonparents *is consistent with* the evolutionary claim that parenting satisfies basic human needs.

(1b) The finding that parents *consistently* report greater happiness and

greater life satisfaction than nonparents *proves* the evolutionary claim that parenting satisfies basic human needs.

第二句话强调的语气更重。为什么？首先，“为人父母者一致报告（parents consistently report）”比“为人父母者通常报告（parents often report）”所描述的结果强调的意味更重。前一种描述暗示几乎所有的为人父母者都报告更高的幸福感和满意度，而后一种描述暗示的是只有一部分人如此。第二，说这些研究仅仅与进化论学说“一致（consistent with）”比说这些研究结果“证实（proves）”进化论学说更大胆。[1]

例如“consistently”和“prove”这样的词汇强调的意味更浓——它们表达大胆、有力和自信。就像我们刚刚所举的例子，副词（very, quite, certainly, always）、动词（show, prove, establish）和形容词（key, crucial, essential, major），经常被用于起强调作用。起强调作用的词汇，其功能类似于音响上的音量按钮，在论文中发出“更大的”声音以确保读者不会错过重要的信息。

有时你也许想达到相反的效果：你也许不是为了表现出大胆和自信，而是希望表现得委婉和谨慎一些，委婉词起着这种作用，可以使用的委婉词包括副词（often, sometimes）、形容词（many, some）和动词（suggest, seems）。例句 1a 中有一个委婉词（often），此时，我们还可以插入似乎（seems）一词，使这句话听上去更谨慎一些，见例句 1c：

（1c）The finding that parents *often* report greater happiness and greater life satisfaction than nonparents *seems consistent with* the evolutionary claim that parenting satisfies basic human needs.

例句 2a 是一个中立的陈述句，2b 和 2c 分别展示了加入强调词的效果。

（2a）Executive function predicts performance on analogical reasoning

[1] 由于心理学的结论是建立在概率基础上的，因此，许多编辑认为在心理学科中证实是很难保证的。他们建议不要用证实这个词，我也同意这一点。

problems.

(2b) Executive function *invariably* predicts performance on analogical reasoning problems.

(2c) Executive function *occasionally* predicts performance on analogical reasoning problems.

例句 2b 醒目地告诉读者执行功能与类比推理之间存在着牢固的关系。相反，例句 2c 中二者的关系减弱了许多，它描述了一个相对较弱或相对短暂的联系。

练习 2.1

找出下列句子中的委婉词或强调词。

1. Individuals who recognize emotions accurately tend to be more successful negotiators.
2. Unlike conservatives, liberals invariably view environmental issues in moral terms.
3. The principle influences on the ease with which children learn to read are letter-sound knowledge and phoneme awareness.
4. People typically judge threatening stimuli to be physically closer than they actually are.

练习 2.2

重写下列句子两次，一次强调的语气，一次委婉的语气。在这些句子中，混合使用动词、形容词和副词。

1. People's posture expresses how powerful they feel.
2. Because better-educated people have more sophisticated decision-making skills and greater knowledge of health-related behavior, they are healthier than less-educated people.
3. Overhearing other people talk on cell phone is annoying because we only hear half of the conversation.
4. People who feel rejected and alienated are more aggressive verbally and physically.

在这里我需要提醒大家，请谨慎使用强调词和委婉词。充满强调词的论文会给人一种傲慢的感觉，这种语气是许多读者反感的。段落 3a 中的 3 个句子就全都使用了强调词：

(3a) When people feel sad, they *invariably* think more deliberately. They have a *very* realistic view of their abilities and *never* rely on stereotypes. Consequently, these findings *prove* the old saying that "sadder is wiser."

这种写作方式是对读者思考能力的不尊重，而且没有得出一个合理的结论。像这样写，作者无异于告诉读者："嘴张大点，我要强制塞一个结论到你的喉咙里。"所以，谨慎地使用强调词吧。

但是重复使用委婉词的行文会给人一种无力感。还是使用前一个段落作为例子，将其中的强调词全替换成委婉词。

(3b) When people feel sad, they *sometimes* think more deliberately. They *may* have a realistic view of their abilities and *typically do not* rely on stereotypes. Consequently, these findings *appear to support* the old saying that "sadder is wiser."

读者对这个段落的反应同样是消极的，不过是因为不同的原因。读者认为作者过于谦卑，作者对所说的内容没有信心。如果作者自己对所写的内容没有信心，读者凭什么相信那些内容，读者甚至可能懒得去读。

上述两个段落强调了在强调语气和委婉语气两者之间达到一个平衡的重要性，即需要找到一个平衡点使论文既不会显得过于傲慢也不会显得过于谦卑，同时又展示出一种自信。当你尝试在句子中表达出这种语气时，一种策略是先写一个既没有强调词也没有委婉词的草稿。我们以 3b 为例，可以这样写：

(3c) When people feel sad, they think more deliberately. They have a realistic view of their abilities and don't rely on stereotypes. Consequently, these findings support the old saying that "sadder is wiser."

你可能会注意到没有强调词和委婉词，这个段落看上去有一定

的信心。通常是这样的：省略掉委婉词常常会使文本显得更有力（注意：在上一句中，我用了三次委婉词！）添加强调词时需要小心，因为它们会将自信的语气转化为傲慢。而使用一两次委婉词常常是很有用的，因为它向读者传递这样一个信息：你对所写的内容是有信心的，但你所说的并不是板上钉钉的。例如，当一个结果可能还存在其他解释时，你就可以这样做。

练习 2.3

重写下列段落两次，一次使用委婉语气，一次使用强调语气（但不是硬往他人喉咙里塞）。

In Experiment 1, participants were more likely to remember a friend's birthday when that birthday was close to the participant's. In Experiment 2, participants learned more about a hypothetical person when that person's birthday was close to the participant's. These findings indicate that people are better able to remember information that is relevant to them personally.

最后，避免同时使用强调词和委婉词，同时使用这两种语气的词汇会导致呈现一些很混乱的信息给读者。例如，如果你弱化了你的发现，那最好不要强调从这些发现中得出的结论。在同一句话中，尤其要注意不要同时使用强调词和委婉词，例如，“这些发现肯定建议”或“这些结果似乎证实”，否则一定会给读者造成困扰。

2.2　通过句子结构来表达强调

政治家做演说、马拉松选手在到达终点前做最后的冲刺、销售员与他人商定协议，所有这些人都存在一个共同点：他们希望有一个强有力的结局。通过句子结构同样可以表达强调。你希望以强有力的方式结束一句话，那么就将重要的、创新性的或革新的观点留到最后。例如，假设你想描述一个新的理论框架，你可以这样写：

（4a）A powerful theoretical framework for studying memory monitoring is suggested by these findings.

然而，如果将理论框架放在句子的结尾处，可以更好地强调这一理论框架：

（4b）These findings suggest a powerful theoretical framework for studying memory monitoring.

现在看看下面这两个句子：

（5a）Stable and substantial individual differences in working memory are shown in performance on N-back, complex span, and delayed matching-to-sample tasks.

（5b）Based on performance on N-back, complex span, and delayed matching-to-sample tasks, individual differences in working memory are stable and substantial.

例句 5a 将工作记忆任务放在句子的结尾，这种顺序使读者预期作者接下来会重点介绍这些任务。相反，例句 5b 将个体差异放在句子的结尾，这种顺序则使读者期待接下来介绍关于这类差异的本质。

接下来看看有哪些技巧有助于我们强有力地结束一个句子。

2.2.1 删掉句尾不必要的内容

看看下面的例子：

（6a）Individuals who have near-death experiences often renew their appreciation for life, with all of its ups and downs.

这个句子中最重要的就是濒死经历与对生活的感激之间的联系。添加“所有的起起落落（all of its ups and downs）”对描述二者之间的联系毫无贡献，因为它仅仅是生活的一个部分，这是大多数读者都熟知的。省略掉这个短语反而有助于强调对生活的感激之情。

（6b）Individuals who have near-death experiences often renew their appreciation for life.

下面是另一个例子：

(7a) When people are tired, their minds often wander from the task they are performing at the time.

这个句子没有起到其应有的效果，因为过长的任务描述使得劳累和注意力涣散之间的重要联系变得模糊不清。这样写会更好：

(7b) When people are tired, their minds often wander from the task at hand.

或者像下面这样写也会更好：

(7c) When people are tired, their minds often wander.

练习 2.4

删掉下列句子中不必要的成分以达到更好的强调效果。

1. When people are administered oxytocin, they are more cooperative with other people.
2. Among children who experience a natural disaster (e.g., Hurricane Katrina), those who view extensive TV coverage of the disaster often experience stress in their daily lives.
3. Multiple-choice tests do little to foster learning because the student need only recognize, not retrieve, the correct answer to the question.

2.2.2 将限定修饰性信息放在句首

有时候你可能希望使用一些短语以达到委婉、谨慎的效果，最常见的例子就是限定结果发生的特定条件。例如，有些结果仅适用于高动机水平被试或生活在贫困状态下的个体。这类起限定作用的短语最好放在句首而非句尾。看下面两个句子：

(8a) Based on findings from the Add Health Study, individuals who have first sexual intercourse in early adolescence are more likely to be dissatisfied with their romantic relationships as adults.

(8b) Individuals who have first sexual intercourse in early adolescence are more likely to be dissatisfied with their romantic relationships

as adults, based on findings from the Add Health Study.

在例子中，有趣的发现是首次性生活发生的时间与成年期浪漫关系的满意度之间的关系。例句 8a 通过将其放在句尾强调了这一结果。相反，例句 8b 以这一有趣的结果为开始，将这一发现的数据来源放在句尾，这样弱化了这个有趣的发现。

下面两个例句呈现出相同的问题：

(9a) Based on studies of adults with mental illness and studies of ethnic minorities, individuals respond more positively to members of stigmatized groups after they have imagined interacting positively with members of those groups.

(9b) Individuals respond more positively to members of stigmatized groups after they have imagined interacting positively with members of those groups, based on studies of adults with mental illness and studies of ethnic minorities.

例句 9a 将关于方法的修饰性信息放在句首，通过强调降低对受指责群体的敌意的程序有力地结束句子。相反，例句 9b 以有趣的结果为开头，然后调转了故事描述的方向，以描述得出那个结论的相关研究为结尾。

关于将修饰性信息放在句首的规则有一个例外：有时修饰性信息是我们想要强调的信息，此时应该将其放在句尾而非句首。例如，如果想要强调只有一个研究考察了青少年首次性生活与关系满意度之间的关系，未来需要更多的研究验证，例句 8b 可能会比 8a 更恰当。类似的，如果目标是希望未来研究对其他受指责群体进行考察，例句 9b 的效果要好于 9a。

练习 2.5

写两个包含下列信息的句子，一个将背景知识作为修饰性信息，一个将核心结果作为修饰性信息。

Research shows that higher levels of the hormone oxytocin are associated with greater distress in interpersonal relationships. However, this relationship is found only for women, not men.

2.2.3　将重要的信息放在接近句尾的地方

有时你需要将一些词汇放在接近句尾的地方以使它们得到应有的重视。有两个技巧可以帮助实现这个功能：

（1）插入 there/it/what + a verb（通常是下列形式，比如 is, are, was 或 were）

例句 10a 是清晰可懂的，但缺少连词。

（10a）People more often cheat in a dimly lit room.

在例句 10a 中，重要的信息分散在整个句子中：人们是主语，说谎是动词，在昏暗的房间里是介词短语。相反，例句 10b 要更有力，因为所有这些重要的信息组成一个独立的从句位于句尾，与句尾距离更接近：

（10b）There is compelling evidence that people more often cheat in a dimly lit room.

类似地，例句 11a 意思清晰但表达显得无力：

（11a）When humans look at a location where food is hidden, dogs look for the food in that spot.

如果以"What is striking is that"开始这个句子，有助于将关键信息放在离句尾更近的位置：

（11b）What is striking is that when humans look at a location where food is hidden, dogs look for food in that spot.

最后，例句 12b 使用"It is"这种方式起到了更强调的作用：

（12a）Profiles on Facebook depict personality reasonably accurately.

（12b）It is noteworthy that profiles on Facebook depict personality reasonably accurately.

我建议偶尔使用这些技巧，将它们用于确实需要强调的句子中。为什么？首先，这些技巧与第一讲中提到的建议是不相符的，第一讲中我们提到句子应该有明确的主语和动词。"它"和"它们"是

很弱的，这就是为什么有些老师和编辑建议作者避免经常使用这些词的原因。第二，它们使句子变得更长，这与写作的简洁性要求相悖。但是，偶尔使用这些技巧有助于读者注意到关键信息。

（2）添加 not only X but Y 这种句子结构

增加强调的一个方式就是将一个元素与其他元素对比。例如，假设 X 是已知的影响某一任务表现的因素，你的研究证明 Y 是另一个影响因素。这种 not only X but Y 的结果可以使这种对比更明显，而且便于将 Y 放于句尾这个受到强调的位置。

假设你做了一个关于玩暴力视频游戏的影响研究，你发现玩这些游戏的男孩通常更具有攻击性且更少参与学校活动。其中，第一个研究结果与前人研究结果一致，但第二个结果是新的发现，你可以这样写：

(13a) Thus, adolescent boys who spend more time playing violent video games are more aggressive and less engaged in school.

这个句子的意思是清晰的，但是没有突出新的发现，使用 not only X but Y 这种结构可以突出新的发现：

(13b) Thus, adolescent boys who spend more time playing violent video games are not only more aggressive but less engaged in school.

相似的，如果你的新发现是道德感影响顾客行为，你可以这样写：

(14a) Consumers choose products based on price, quality, and a sense of social responsibility.

这个句子的意思清晰，但对新观点的提出作用不大。

(14b) Consumers choose products based not only on price and quality but on a sense of social responsibility.

例句 14b 更有效，因为 not only X but Y 这种句子结构，将已经被接受的观点与新观点进行比较，这样突出了新观点。

练习 2.6

用前文介绍的 4 种技巧重写下列句子，将需要强调的材料放在靠近句子结尾的地方。

1. Individuals differ consistently in the emotions they feel most frequently and in the emotions they typically elicit in other people.
2. People are at greater risk for suicide when they have attempted suicide previously and when they have implicit thoughts about death.
3. For dogs and people, glucose boots self-control.
4. When choosing a potential mate, humans consider features that can be assessed quickly because they are visible（e.g., height, weight）as well as features that require more time and effort to assess（e.g., education, occupation）.

小结

1. 使用强调词表达强调语气，使用委婉词表达谨慎语气。但不要过度使用这些词：过多的强调词会使你的论文显得傲慢，较多的委婉词则使论文显得不可信。
2. 将你想要强调的内容放在句尾。主要的技巧包括：省略不必要的词、将修饰性的信息放在句首以及将文本转换到句子的右边。

课后练习

1. 随机选择一段论文，找出其中的强调词和委婉词，并将委婉词替换为强调词，将强调词替换为委婉词。
2. 找出句尾包含不必要信息的句子，发现使句子变弱的信息。
3. 找出将修饰性信息放在句首的句子，重写句子将这些信息放在句尾，注意强调的内容发生了什么变化。
4. 找出使用 that/it/what 这类结构强调的句子。删除这些结构并注意强调内容发生的变化。
5. 找出包含了多个元素的句子，使用 not only X but Y 这种句子结构强调其中的某个元素。

练习答案

练习 2.1

1. Individuals who recognize emotions accurately *tend* [委婉词] to be more successful negotiators.
2. Unlike conservatives, liberals *invariably* [强调词] view environmental issues in moral terms.
3. The *principle* [强调词] influences on the ease with which children learn to read are letter-sound knowledge and phoneme awareness.
4. People *typically* [委婉词] judge threatening stimuli to be physically closer than they actually are.

练习 2.2

1. People's posture *seems* to expresses how powerful they feel.（动词起委婉作用）

   Everyone's posture expresses how powerful they feel.（形容词起强调作用）
2. Because better-educated people *consistently* have more sophisticated decision-making skills and greater knowledge of health-related behavior, they are *inevitably* healthier than less-educated people.（副词起强调作用）

   Because better-educated people *often* have more sophisticated decision-making skills and greater knowledge of health-related behavior, they are *typically* healthier than less-educated people.（副词起委婉作用）
3. Overhearing other people talk on cell phone is *often* annoying because we only hear half of the conversation.（副词起委婉作用）

   Overhearing other people talk on cell phone is *invariably* annoying because we only hear half of the conversation.（副词起强调作用）
4. *All* people who feel rejected and alienated are more aggressive verbally and physically.（形容词起强调作用）

   People who feel rejected and alienated *tend to be* more aggressive verbally and physically.（动词起委婉作用）

练习 2.3

谨慎的版本：

In Experiment 1, *most* participants were more likely to remember a friend's birthday when that birthday was close to the participant's. In Experiment 2, participants *usually* learned more about a hypothetical person when that person's birthday was close to the participant's. These findings *suggest* that people *tend to be* better able to remember information that is relevant to them personally.

（在第一句我加了一个形容词，第二句加了一个副词，第三句加了几个动词。）

大胆的版本：

In Experiment 1, participants *usually* remembered a friend's birthday when that birthday was close to the participant's. In Experiment 2, participants learned more about a hypothetical person when that person's birthday was close to the participant's. These findings *indicate* that people *consistently* remember information that is relevant to them personally.

（在第一句，我用"通常（*usually*）"替换掉"更容易（*were more likely to*）"；第二句，删掉了"通常（*usually*）"，没有再加强调词；第三句，加了一个更强有力的动词和副词。）

练习 2.4

1. When people are administered oxytocin, they are more cooperative ~~with other people~~.（合作的定义就包含了其他人）
2. Among children who experience a natural disaster（e.g., Hurricane Katrina）, those who view extensive TV coverage of the disaster often experience stress ~~in their daily lives~~.（日常生活以外，哪里还有压力会影响到一个人）
3. Multiple-choice tests do little to foster learning because the student need only recognize, not retrieve, the correct answer ~~to the question~~.（答案的定义就是指向问题的）

练习 2.5

修饰性信息作为背景知识：For women but not men，higher levels of the hormone oxytocin are associated with greater distress in interpersonal relationships.

修饰性信息作为强调重点：Higher levels of the hormone oxytocin are associated with greater distress in interpersonal relationships, but only for women and not men.

练习 2.6

1. It is striking that individuals differ consistently in the emotions they feel most frequently and in the emotions they typically elicit in other people.　OR

Individuals differ consistently not only in the emotions they feel most frequently but in the emotions they typically elicit in other people.

2. There is compelling evidence that people are at greater risk for suicide when they have attempted suicide previously and when they have implicit thoughts about death.　OR

It is noteworthy that people are at greater risk ...

3. What emerges in this literature is that, for dogs and people, glucose boots self-control.（如果是为了强调这一现象跨物种的相似性，可以将修饰性短语移到句子的结尾：What emerges in this literature is that glucose boots self-control for dogs and people. 或者这样更好：What emerges in this literature is that glucose boots self-control not only for people but for dogs.）OR

There is abundant evidence that glucose boots self-control in dogs and people.

4. When choosing a potential mate, humans consider not only features that can be assessed quickly because they are visible（e.g.，height，weight）but features that require more time and effort to assess（e.g.，education, occupation）.　OR

What is noteworthy is that when humans choose a potential mate, they consider features that can be assessed quickly because they are visible（e.g.，height, weight）and features that require more time and effort to assess（e.g.，education，occupation）.

第 3 讲

如何使文章简明生动

这一讲主要包括两个部分：一是删掉不必要的内容，使文章更加简洁明了；二是增加一些内容，使文章更加生动有趣。

3.1 简　明

科学论文通常都是非常简洁明了的。为什么呢？首先，科学家们都很忙，没有多余的时间阅读过于冗长的报告。其次，很多期刊对稿件有字数限制，例如，《心理科学》（*Psychological Science*）要求一篇研究报告的字数控制在 2 500 字左右。最后，从审美的角度来说，最好采用适当长度的内容将想要表达的观点表达出来。

这里，我们主要介绍四种有助于使论文简洁明了的写作方法。

3.1.1 将否定表达改为肯定表达

在英文中，有很多 not + X 的词组形式，都可以换成肯定表达。例如：

not missing → present

not stop → continue

not empty → full

再例如，以下例句 1a 中包含 not + X 的词组形式的否定表达，也可以改写成例句 1b 中的肯定表达。

(1a) Salespeople more often invest extra effort when a customer is not rude.

(1b) Salespeople more often invest extra effort when a customer is polite.

例句 1b 只少用了一个单词，但句子含义却更清晰，在写作中，这种改变很有必要，因为在表达中，说明事物是什么（如，polite）比说事物不是什么（如，not rude）时，定义更清楚。

练习 3.1

请把下面句子中的否定表达改为肯定表达。

1. There are not many studies on the impact of color on memory for scenes.
2. People sometimes do not remember the source of their memories.
3. Exposure to alcohol ads has behavioral consequences that do not differ from those obtained from actually consuming alcohol.

3.1.2 删掉累赘词汇

很多人在写作过程中常常会过度使用形容词，然而在某些时候，形容词所修饰的名词本身就暗含了这些形容词想要表达的意思，再使用这些形容词就会显得很累赘。例如，terrible tragedy、true facts 和 future plans。根据这些名词的定义，悲剧是可怕的，事实都是真的，计划都是指向未来的。所以，这些形容词 terrible、true、future 就显得很多余。我们再来看看下面的这个例句。

(2a) After participants had completed the experiment, they were given a free gift.

Gift（礼物）这个词本身就有 free（免费的）含义，所以这里我们可以删去 free，见例句 2b。

(2b) After participants had completed the experiment, they were given a gift.

同样，很多副词在句子中也是没有必要的。因为它们修饰的动词本身可能就暗含了它们所要表达的意思。例如，finish completely、prove conclusively 和 suggest tentatively.

另外一个类似的错误是对一些已经具有类别含义的词，进行再次归类。例如，period of time、red in color、triangular in shape、heavy in weight 和 depreciate in value。在这些例子中，这些分类（如，time、color、shape）已经蕴含在名词、形容词或者副词中了。我们再看看下面这个例句：

(3a) All the participants were of the male gender.

在这个例句中，gender（性别）这个词是没有必要的，因为 male（男性）这个词已经代表了性别。所以可以把 gender 删掉，改写成例句 3b，也不会影响意思的表达。

(3b) All the participants were male.

将否定表达改为肯定表达和删掉累赘词汇一样，虽然在一句话中只能减少一两个词，但是对于整篇文章而言，却可以使文章简明很多。

练习 3.2

请删掉下面句子中的累赘词汇。

1. What's particularly striking is that the effect of misperception on intergroup conflict was large in size.
2. After participants had completely finished the perspective-taking task, they were tested on a working-memory task.
3. When people believe that free will is an illusion, they are more likely to behave in ways that are deceitful in nature.

3.1.3 用词代替短语

在英语表达里面，有很多短语是可以用一个词来代替的。表 3.1 列举出了其中的一些例子。

表 3.1 一些常见的能被替换成单词的短语

短 语	单 词
A large percentage of	Most
As a consequence of	Because
At that point in time	Then
At the present time	Now
Due to the fact that	Because
In close proximity to	Near
In some cases	Sometimes
In the near future	Soon
In the situation where	When
Subsequent to	After
With the exception of	Except

我们再看看下面的例子。

(4a)In the event that synesthesia is a product of learning, pairing of sounds and visual symbols reflects a person's experiences.

在例句 4a 中，In the event that 可以用 if 代替，改写成例句 4b 一样，这样可以节省三个单词。

(4b)If synesthesia is a product of learning, pairing of sounds and visual symbols reflects a person's experiences.

当然，在英语中有很多表达与表 3.1 中的短语一样，是可以用一个单词来替换一个很长的短语的，你可能没有办法全部记下来。但是在写作过程中，可以注意一下你所用的短语，看能不能用一个单词代替。

练习 3.3

请找出下面句子中可以用单词代替的短语。

1. Participants were told to determine the location of the target in an array of photographs.
2. Emotionally significant words have a tendency to be identified more accurately than emotionally neutral words.
3. During the time that participants in the control group were sitting, those in the experimental group were jogging.

3.1.4　删掉无意义的副词和形容词

这条建议看起来好像很极端，几乎是去掉了一个句子中的两个成分，即副词和形容词。然而，在实际写作过程中，很多人的确加入了太多没有什么意义的形容词和副词。所以，一个很好的办法就是删掉一句话中所有的形容词和副词，然后再选择性地加入那些必须使用的形容词和副词。

例句 5a 中斜体的形容词和副词，在例句 5b 中被删掉了。

(5a) Interviewers *often* gesture during *routine investigative* interviews, a *nonverbal* behavior that *certainly* affects the interviewee's *vocal* responses.

(5b) Interviewers gesture during interviews, a behavior that affects the interviewee's responses.

然后根据这些删掉的词对句子的重要程度进行排序。需要注意的是，很多时候我们可以根据句子上下文的语境来判断每个词的重要性，如果我们不了解词的背景，那么在删词的时候就要特别小心。例句 5a 中的六个斜体单词（often, routine, investigative, nonverbal, certainly, vocal），我认为 investigative 是最重要的，因为它说明了这种姿势发生的地点；我会把 routine 和 certainly 排在最后，因为一个按照惯例的访谈和一个普通的访谈没有多大区别；certainly 排在倒数第二，访谈者的行为会影响到被访谈者的反应，这是肯定的，

句子的语气已经很强了，不需要再加 certainly；often 这个词也可以不要，但是如果作者想要提醒读者注意手势使用的频率的话，这个词也可以要；如果作者还想要比较两种不同的表达方式的话，那么 nonverbal 和 vocal 这两个词也很重要，如果不需要强调这种差别，这两个词也是可以删掉的。所以，我喜欢例句 5c 这样的表达方式：

（5c）Interviewers *often* gesture during *investigative* interviews, a behavior that affects the interviewee's responses.

下面 6a 是另外一个例句，其中形容词和副词都用的斜体。在例句 6b 中除了最后一个形容词，其他形容词和副词都被删掉了。

（6a）Following a violation of *human* trust, a *sincere* apology repairs trust only when people *really* believe that *moral* character is *actually malleable*.

（6b）Following a violation of trust, an apology repairs trust only when people believe that character is malleable.

在这六个形容词和副词中（human, sincere, really, moral, actually, malleable），有两个词是必须保留的：moral 和 malleable，因为这两个词是整个句子的核心，只有在人们相信道德品质是可以改变的时候，道歉才会起作用。但是其余的几个词似乎就不需要了：trust 这个词一般都是用在人身上，而且从句子中很容易看出这个观点是针对人提出来的，因此，trust 之前没有必要用 human（人类）这一形容词去限定和修饰；除非要做对比，才会说道歉是不是真心诚意的，因此，也没有必要添加 sincere（真心诚意）。另外两个词 really 和 actually 也没有表达什么实质的意义，所以可以删除。下面的例句 6c 是我喜欢的一种表达。

（6c）Following a violation of trust, an apology repairs trust only when people believe that *moral* character is *malleable*.

这种将所有形容词和副词都删掉的方法看起来很费力，但值得推行。在上述例子中，因为删掉了那些没有实质意义的词，所以使

句子显得更加简洁明快。除非你已经能够很自然地写出简洁明了的句子，否则你修改文章的第一步就是从每个句子中删掉一个形容词或者副词，这样一段至少可以删掉五个词。当然，也有些句子和段落不需要删词，但大多数时候你会发现文章中存在着大量的没有意义的形容词和副词，而且在删词的过程中，你可以锻炼出快速找到无意义词的技能。

总之，运用好以上四点，即把否定表达改为肯定、删掉累赘词汇、用单词代替短语，以及删掉无意义的副词和形容词，你的文章会越来越接近简洁的完美。

练习 3.4

找出下面句子中所有的形容词和副词，然后删掉那些不必要的。

1. Married individuals who verbally report having a truly happy marriage actually have better physical health and increased longevity.
2. The testing effect refers to the psychological phenomenon that repeated retrieval of information actually helps people to remember that same information much better.
3. When people listen carefully to extremely sad music, they are relatively biased to hear many words that relate to death.

3.2 生　动

我看过很多网站，没有哪个网站规定说科学论文就一定要写得枯燥无味。然而，似乎很多作者都在追求一种清晰但很单调的写作风格。这种做法是不可取的，因为当科学论文让读者觉得冗长乏味的时候，科学就很难发挥出它本身的作用。科学本身是一件令人很兴奋的事情，作者完全可以通过科学论文将这种兴奋传递给读者。在这一小节中，我会给出几个能使科学论文增加色彩的建议。这些建议也许不会让你立马写出最畅销的作品，但可以帮助你写出生动

有趣的文章来。

3.2.1 使用主动语态

在第一讲关于清晰表达的写作中，我强调如果把人作为主语，他们发出的动作作为谓语，这种形式能使读者更好地理解句子的意思。事实上，这种表达方式也可以使你的文章更加生动、有吸引力。请看下面的例句：

(7a) Income inequality at the national level is negatively correlated with happiness.

阅读例句 7a 句时，就像在读一本指南手册，非常枯燥无味。在下面的例句 7b 中，我们将句子的主语换成了人，谓语换成了相关的行为。

(7b) People are relatively happy when their country's wealth is distributed evenly.

修改后的句子就显得生动了一些，它不再抽象，而是陈述了什么让人们感觉幸福快乐。

3.2.2 使用修辞手法

有经验的作者通常会运用一些修辞手法，将词汇用一种特殊的方式表达出来，使文章达到与众不同的效果。例如，一些夸张的表达可以起到强调的作用。事实上，在科学写作中，过于夸张和保守的表达都会有一定的风险，因为读者很可能会根据字面含义来理解，而不是理解这些词背后的比喻含义。

1. 比喻

比喻通常是将两个不同的事物放在一起进行说明，使文章的内容更清晰易懂。换句话说，比喻可以将一些新奇、不熟悉的观点比喻成人们熟知的观点，以帮助人们更好地理解问题。下列的例句可以很好地说明这一点。

(8) Hyperactivity, inattention, and impulsivity signify ADHD, just as the

swoosh signifies Nike products.

类似的，下述例句将目标导向符号比作语法规则，以说明为达成目标，目标导向符号是如何将动作组合在一起的。

(9) Just as grammar specifies legal combinations of words, means-end parse indicates how actions can be combined to achieve goals.

除了使读者更容易理解外，比喻还可以使句子更加生动。使用比喻这种修辞手法强调和大小相关的属性（如，影响的强弱，事情发生的概率或者任务的难易程度）时，尤其方便。例句 10 使用了比喻的手法来表现一个目标是多么容易被探测到。

(10) The misoriented letter was detected as readily as a red cap on a field of new-fallen snow.

例句 11 使用了比喻的手法来强调影响是多么巨大。

(11) The difference in change detection in the face and house conditions represents an industrial-strength effect.

最后，例句 12 使用了比喻的手法来强调一种现象的普遍性。

(12) In short, adolescents who are self-conscious in the presence of peers are as common as ants at a summer picnic.

当然，比喻的修辞手法不仅仅局限于和大小有关的对比中，很多别的观点也可以利用这种手法将想要描述的事物比喻成人们熟悉的、有趣的事物。你会发现很多使用比喻的网站可以激发你的创造力。

但是对一个使用比喻手法的新手来说，需要注意以下三点：第一，避免比喻前后不一致的现象，就像例句 13a。

(13a) Readers were flying high with congruous text but drowning with incongruous text.

这个例句的问题在于，句子前半部分用了飞翔作比喻，但是后半部分却换成了游泳。例句 13b 就避免了这个问题。

(13b) Readers had smooth sailing with congruous text but encountered

choppy water with incongruous text.

然而，例句 13b 却呈现了第二个问题：比喻过于俗套。用过这个比喻（smooth vs. choppy waters）的人太多了。例句 14a 也存在这样的问题。

(14a) Thus, when walking on unsteady surfaces, infants are slower than snails.

修改成例句 14b 中的比喻则更加生动。

(14b) Thus, when walking on unsteady surfaces, infants are slower than a checkout line at Best Buy on Black Friday[1].

然而，例句 14b 存在着第三个问题：比喻发挥作用的前提是读者能够理解比喻的事物。在这个例子中，对百思买集团不熟悉，也不知道黑色星期五含义的人会觉得非常困惑。

上面的例子说明，想要运用好比喻的修辞手法并不是一件很容易的事情。但是在这上面付出努力是很值得的，因为这种方法用得好可以使你的文章更加生动有趣、通俗易懂，更容易从一般的科学论文中脱颖而出。

练习 3.5

使用比喻的修辞手法对下面句子进行修改，后面括号内的单词会对你有用。

1. Speed of information processing increases steadily in childhood and adolescence, as if …[upgrading a computer's CPU].
2. When individuals with Parkinson's disease reach for an object, their hand moves a short distance, slows, and then moves again in a different direction like…[ship navigator].
3. According to ego-depletion theories, self-control depends on a limited pool of mental resources, just as…[muscle movements].

[1]Black Friday, 黑色星期五是感恩节之后的第一个星期五，标志着美国进入圣诞购物季，通常商店里都会挤满了想要买到物美价廉物品的消费者。

2. 倒复法

可能你对这种修辞手法的名字不太熟悉，但是看完下面美国总统演讲的例子，你就会发现这种手法在生活中其实很常见。

(15) What counts isn't necessarily the size of the *dog* in the *fight*—it's the size of the *fight* in the dog. (Eisenhower)

(16) Ask not what *your country* can do for *you*; ask what *you* can do for *your country*. (Kennedy)

(17) *America* did not invent *human rights*...*Human rights* invented *America*. (Carter)

从上述这些例子可以看出，倒复这种修辞手法就是以相反的顺序重复之前说过的话。下面三条是使用倒复法应该注意的要点。

第一，重复的通常都是名词或者名词性短语。

第二，重复的名词通常是两个句子都会涉及的。

第三，重复的名词通常都出现在句子的后半部分或者出现在从句中。

使用倒复法的第一步是确定两个在句中起重要作用的名词，然后考虑使用什么样的动词或者短语可以使这两个词联系起来。例如：

(18a) This literature demonstrates wide-ranging behavioral consequences of belief in God but has done little to clarify the nature of those beliefs.

在这个句子中，我会选择 God 和 belief 作为关键名词，我们可以写成例句 18b。

(18b) Thus, research reveals much about the impact of *people's belief* in *God* but tells little about the *God* in *people's beliefs*.

我们来看看另外一个运用倒复法的例子。

(19) In other words, couples who frequently *control their emotions for the sake of their marriage* sometimes end up *controlling their marriage for the sake of their emotions*.

运用好倒复法对于新手来说是很大的挑战，但是效果却非常

明显，特别是用在文章的最后一句时。那些引用率很高的文章中，其最后一句话很多都是用倒复法来写的。

练习 3.6

使用倒复法完成下面的句子。

1. *Neglecting your siblings* will lead ... [siblings will ignore you].
2. When teams *lose sight of outcomes*, the likely... [they probably won't win]
3. People do not *know* how much others *remember* but... [other people's knowledge is something they do retain].

3. 创造新词

很多作家都会创造一些新的单词来使自己的作品变得更加生动。莎士比亚就创造了超过 1 000 个新词。现代作家 J.K Rowling 也创造了很多新词（Plotnik, 2007）。如果这种方法运用得好，也可以使文章增色不少。

有很多方法可以创造出新词，包括简写（如，把 probably 写成 prob；把 obviously 写成 obv），混合词（如，snowmageddon，用来表示大的雪灾），把人们熟悉的名人的名字用作动词或者名词（例如，蒂姆蒂博代表着单膝下跪祈祷[1]）。在这一节，我主要介绍三种在心理学写作中，比较容易掌握且好用的创造新词的方法。

（1）加前缀和后缀

英语单词中的前缀、后缀很常见，表 3.2 就列举了一些常见的前缀、后缀。给现有的单词加上前缀或者在后面加上后缀是最简单的创造新词的方法。例如，能够用手势来表达的含义，可以用 gestureable；那些排除其他个体社交影响的人可以用 excludaholics。

[1]Tebowing /to tebow 可翻译为“蒂博式的祈祷”或“蒂博式的行为”。因为蒂博是虔诚的基督徒，每场比赛前都要单膝跪地祈祷。2011 年 10 月底，蒂博的粉丝将蒂博的祈祷照片贴在 facebook 上，首次用了“Tebowing”，结果不出一月，就获得超过千万次使用。由于其在全球使用的广泛程度，2011 年 12 月全球语言监测机构正式确认“Tebowing”为一个英语单词。时代杂志在 2011 年 12 月 19 日专门介绍了这个新的流行语。—译者注

表 3.2　一些常见的前缀和后缀

前缀	含义	后缀	含义
a(an)-	without	-able	capable of
macro/micro-	large/small	-aholic	one addicted to something
mis-	faulty	-cian/-ee/-er	one who
neo-	new	-ism	belief system
omni-	all, always	-ize	to cause
pseudo-	fake, false	-ness	state of

练习 3.7

把下面句子中的斜体单词加上表 3.2 中的一个前缀或者后缀，变成一个新词，而且不改变句子的意思。

1. A facial expression that looks like a *smile* but isn't because it doesn't engage muscles in the mouth and eyes.
2. A pattern of *transfer* in which original learning extends to nearly all novel tasks.
3. *Retrieval* that is inaccurate because it yields stimuli similar to those presented instead of those that were actually presented.

（2）使用连字符短语

英语中经常使用带有连字符的短语修饰名词，如 a deer-in-the-headlights look，a state-of-the-art computer 和 an over-the-top experience。你也可以创造你自己的连字符短语，从而避免读者读一个句子读得上气不接下气。类似的例子还有：choke-under-pressure leaders，aggressive-toward-other-people dreams 和 faster-reaction-times-are-associated-with-reduced-mortality effects.

通常在一个有很长的名词短语的句子中，使用连字符短语是很有用的。见例句 20a：

(20a) The finding that memory was superior for the location of taboo words supports…

这个句子理解起来很难，因为主语（finding）和谓语之间（supports）的修饰语太长，两者之间间隔了十个单词。这里我们就可以运用连字符短语，改进这个句子。

(20b) The superior-memory-for-location-of-taboo-words finding supports…

这种字符连接的方法提醒读者：这些词是一个起修饰作用的整体。使用这种方式可以缩小主语和谓语之间的间隔。在科学论文写作中很少使用这种字符连接法，但是这种方法的确可以使文章更出彩。

在使用字符连接名词的方法时，有三点需要注意。第一，如果有可以使用的形容词，最好不要用连字符短语。例如，本来可以直接说 affluent people，但是你却用 have-abundant-material-possessions people，这会使读者觉得你的词汇量不够，或者认为你在故意卖弄。第二，在使用连字符短语修饰人时，要尤其注意，因为这有可能导致去个性化（例如，它将人与描述人的那个词等同起来，让人认为一组人都是一样的）。换句话说，人们拥有的不只物质财富，他们还有可能是友好的、快乐的或者不负责任的。将他们描述成 affluent people，仅仅只从一个维度看人，大大降低了人类之间的异质性。第三，避免使用太长的连字符短语，例如，Hey!-look-what-I-can-do-with-lots-of-hyphens-in-my-writing-to-get-your-undivided-attention phrases。一般在英语写作中，包括三到五个单词的连字符短语最有效。

练习 3.8

使用连字符来修饰下面被标为斜体的名词。

1. The *motive* to perceive the social system as fair is particularly well established…
2. The findings help to explain the prevalence of *people* who see the forest before the tress.
3. *People* performing better in the morning illustrates…

4. 动词化

五十年前，dialogue、impact 和 message 都只能用作名词，但是现在把它们当作动词使用的情况很普遍。

(21) Effective bosses frequently *dialogue* with their employees.

(22) Learning a second language during childhood can *impact* the development of executive control.

(23) Western adolescents often *message* their feelings rather than showing them overtly.

但是使用这种方法时要很小心，因为很多名词都有动词形式。一般可以动词化的名词，都是可以作宾语的名词。例如：

(24a) Strangers often achieve *rapport* when their body movements are coordinated.

上述例句 24a 中的 rapport 是动词 achieve 的宾语，在下面的例句中，它可以当作动词来用。

(24b) Strangers often *rapport* when their body movements are coordinated.

类似的例子见例句 25a。

(25a) Pursuing a *goal* often happens unconsciously.

goal 是动词 pursuing 的宾语，它可以当作动词来使用，如例句 25b。

(25b) *Goaling* often happens unconsciously.

在使用动词化的方法时，有两点需要注意。第一，确保这个新的动词完全可以表达它所代替的词的意思。例如，我觉得下述例句中的 gist 是可以进行动词化的。

(26a) Adults readily recall the *gist* of stories.

(26b) Adults *gist* stories.

实际上，在这里 gist 作为一个动词并不能很好地表达句子的意

思，因为它没有暗含 recall the gist of stores 的意思 。recall the gist of stories 表示人可能已经归纳出故事的主旨或者表现出了其他与故事主旨有关的行为。

第二，最好是在可以通过论文内容推测出这个动词所要表达的意思时，采用动词化的方法。此外，在一篇论文中，使用动词化的方法创造的新词最好不要超过两个。如果有一两个新词，读者会觉得很有意思。但是新词过度，就会很难让人读懂。

练习 3.9

把下面的斜体单词动词化，以使句子更生动。

1. These findings suggest that parents are rarely successful when they try to make their shy children more *extroverted*.
2. Contact with *nature* makes people feel happy.
3. People who violate *taboos* (e.g., they cheat or steal) often are punished for their behavior.

小结

1. 使文章更简洁的方法包括：用肯定表达代替否定表达；删掉累赘词汇；用单词代替短语；只保留必要的形容词和副词。
2. 使文章更加生动的方法包括：使用主动语态；使用修辞手法（比喻和倒复法）；创造新词。

课后练习

1. 寻找可以用肯定表达代替否定表达、用单词代替短语的句子；看一看哪些形容词和副词是可以删掉的。
2. 在引言或者讨论部分，试着用比喻的修辞手法来说明一个复杂的观点。
3. 在讨论的最后一段，试着把最后一句话用倒复法的形式进行表达。
4. 在引言或者讨论部分，通过加前后缀、连字符或者动词化的方法来创造新词。

练习答案

练习 3.1

1. There are *few* studies on the impact of color on memory for scenes.
2. People sometimes *forget* the source of their memories.
3. Exposure to alcohol ads has behavioral consequences that *are similar to* those obtained from actually consuming alcohol.

练习 3.2

1. What's particularly striking is that the effect of misperception on intergroup conflict was large ~~in size~~.
2. After participants had ~~completely~~ finished the perspective-taking task, they were tested on a working-memory task.
3. When people believe that free will is an illusion, they are more likely to behave in ways that are deceitful ~~in nature~~.

练习 3.3

1. Participats were told to ~~determine the location~~ of *find* the target in an array of photographs.
2. Emotionally significant words ~~have a tendency~~ *tend* to be identified ~~more accurately than~~ emotionally neutral words.
3. ~~During the time that~~ *While* participants in the control group were sitting, those in the experimental group were jogging.

练习 3.4

下列句子中形容词和副词都被标成了斜体。

1. *Married* individuals who *verbally* report having a *truly happy* marriage *actually* have *better physical* health and *increased* longevity.

Individuals who report having a *happy* marriage have *better physical* health and *increased* longevity.

2. The *testing* effect refers to the *psychological* phenomenon that *repeated* retrieval of information *actually* helps people to remember that *same* information *much* better.

The *testing* effect refers to the phenomenon that *repeated* retrieval of information helps people to remember that information better.

3. When people listen *carefully* to *extremely sad* music, they are *relatively* biased to hear *many* words that relate to death.

When people listen to *sad* music, they are biased to hear words that relate to death.

练习 3.5

1. Speed of information processing increases steadily in childhood and adolescence, as if the child's mental hardware is constantly being upgraded to a newer, faster CPU.
2. When individuals with Parkinson's disease reach for an object, their hand moves a short distance, slows, and then moves again in a different direction like a ship directed by an unskilled navigator.
3. According to ego-depletion theories, self-control depends on a limited pool of mental resources, just as movements of muscles draw from a limited supply of glucose.

练习 3.6

1. Neglecting your siblings will lead your siblings to neglect you.
2. When teams lose sight of outcomes, the likely outcome is to lose.
3. People do not know how much others remember but they do remember how much others know.

练习 3.7

1. pseudosmile
2. omnitransfer
3. misretrieval

练习 3.8

1. The *perceive-the-social-system-as-fair* motive is particularly well established...
2. The findings help to explain the prevalence of *see-the-forest-before-the-trees* people.
3. *Performing-better-in-the-morning* people illustrate...

练习 3.9

1. These findings suggest that parents are rarely successful when they try to *extrovert* their shy children.
2. *Naturing* makes people feel happy.
3. People who *taboo* (e.g., they cheat or steal) often are punished for their behavior.

第 4 讲

如何写出精彩的段落

如果你的每个句子都非常的简洁、生动和有说服力，那么你基本走上了学术论文写作的正路。但是就像即使买了很多食材，也不一定能烹饪出一顿美味佳肴一样，因此，能写出漂亮的句子并不表示一定能写出出色的论文。你还需要学会如何将这些好句子组合起来，构成一个连贯的段落。这就是本讲要讲述的内容。

4.1 段落结构

一个段落包括好几个句子，来陈述一个中心观点，而不是两个、三个或四个。如果你想要表述一个新的观点，那么你就要重起一个新的段落。通常情况下，第一句是整个段落的主题句。由于主题句介绍了整个段落的核心思想，所以它是非常重要的。主题句之后紧跟着的几个句子是对其进行进一步说明或者论证。通常在段落的最后还有一个总结性的句子，作用是再次重申本段主要观点或者对论据进行归纳总结。

4.1.1 主题句

一个好的主题句通常包括两个部分：第一，一个明确的主题；第二，一个中心思想。举例来说：

(1) The sex hormone testosterone has been linked to greater spatial ability in females.

这个句子的主题是睾丸激素（testosterone），中心思想是睾丸激素和女性较高的空间能力有关。这样，第一句就给了读者一个明确的方向，这个段落剩下的部分的关注点在于睾丸激素对于女性空间能力的影响。类似的例子见例句 2：

(2) Following another person's gaze is a critical part of effective social interaction.

这个句子的主题是注视追随（gaze following），中心思想是注视追随对社会互动的重要意义。

练习 4.1

找出下面句子中的主题和中心思想。

1. Portion size influences how much food people eat.
2. Helping individuals orient to an environment and serving as markers for object locations are two proposed roles for landmarks.
3. Children who experience lower-quality maternal care respond less adaptively to stress.

下功夫写好每段的主题句是很有必要的，因为很多时候读者会通过浏览每段的主题句来了解整篇论文的内容。特别是在引言和讨论部分，主题句更是起着不可替代的作用（这一点将会在第 5 讲和第 7 讲中着重描述）。

4.1.2 段落的展开

通常主题句后面需要三到六个句子详细阐述中心思想。心理学论文写作中，段落展开的方式有三种。其中最普遍的一种是提供支

持论点的论据。以例句 1 为例，可以提供三到四个例子来说明睾丸激素和女性空间能力之间的关系。

(3) For example, women who have more testosterone in saliva typically have greater spatial ability scores. In addition, women using oral contraceptives that contain progestin derived from testosterone respond faster on mental rotation problems. Finally, women exposed to atypically large amounts of testosterone during prenatal development respond more accurately on mental rotation tasks.

这里的每个句子都说明了睾丸激素与女性空间能力之间的关系。

另外一种运用较多的展开段落的方式是列举不同的理论或假设。例句 4a 正是这样一种类型的主题句。

(4a) The parental investment model predicts that jealousy takes different forms in males and females.

在这个段落中，剩下的句子描述了几种不同的理论或假设。例句 4b 阐述了男性和女性两种不同的嫉妒方式。

(4b) The parental investment model predicts that jealousy takes different forms in males and females. On the one hand, males are more concerned about sexual infidelity because it increases the possibility that they may invest resources in offspring they have not fathered. On the other hand, females are more concerned about emotional infidelity because it increases the possibility that the father will abandon the mother and her offspring, depriving them of resources needed for child rearing.

最后一种比较普遍的段落展开方式是对随着时间推移的某种过程进行描述。这些段落通常描述的是一系列的行为和认知过程，以及实验方法中的一些步骤。

(5) Experimental trials involved four events. First, a fixation circle appeared at the center of the screen for 500 ms. Then the stimulus array appeared for 100 ms and was followed by a masking stimulus for 300 ms. Finally, participants reported the orientation of the target in the stimulus array.

在例句 5 中，描述的是一个实验中每个试次的四个事件发生的顺序。

练习 4.2

阅读下面的句子并判断它属于哪种段落展开结构。

1. In contrast, state anxiety is linked to characteristics of specific situations and consequently should affect attention through bottom-up processing. Trait anxiety is a by-product of an individual's personality and thus should affect attention through top-down processing. Trait and state anxiety affect attention through different mechanisms.
2. In other words, darkness makes people feel anonymous. Consequently, in darkness people are more often dishonest and selfish. According to this model, experiencing darkness leads people to believe they are relatively invisible.
3. The simplest is the number of lives saved. In health research, one of three measures is used to evaluate the life-saving impact of treatments. A third is the number of high-quality life years gained. Another is the number of life years gained.

4.1.3 结尾句

大部分的段落都会包括一个结尾句，作用是对段落要点进行归纳总结。然而，在科学论文写作中，有一些段落比另外一些段落更加适合使用结尾句。采用列举信息的方式进行展开的段落，结尾句通常可能要归纳所有列举的要点。下面这个例子中的斜体句就是对例子 3 的总结。

(6) The sex hormone testosterone has been linked to greater spatial ability in females. For example, women who have more testosterone in saliva typically have greater spatial ability scores. In addition, women using oral contraceptives that contain progestin derived from testosterone respond faster on mental rotation problems. Finally, women exposed to atypically large amounts of testosterone

in prenatal development respond more accurately on mental rotation tasks. *Thus, greater levels of testosterone—reflecting individual differences, use of oral contraceptives, or prenatal exposure—are correlated with greater spatial skill.*

就像例子 6，结尾句通常会有一些标志性的词，比如：thus、in summary 和 to conclude 等。

对于以几种不同理论和假设的方式展开的段落，结尾句通常要涉及每个理论和假设。例如：

(7) The parental investment model predicts that jealousy takes different forms in males and females. On the one hand, males are more concerned about sexual infidelity because it increases the possibility that they may invest resources in offspring they have not fathered. On the other hand, females are more concerned about emotional infidelity because it increases the possibility that the father will abandon the mother and her offspring, depriving them of resources needed for child rearing. *In summary, men's jealousy is rooted in sex, but women's jealousy is rooted in emotions.*

对于这两种形式的段落，即列举信息式展开和正反对照式展开，当段落比较长的时候，结尾句更加重要。因为在这种情况下，读者可以很容易了解到段落的中心思想以及支持它的证据。而且结尾句让读者意识到这个部分结束了，特别是在引言和讨论部分。但是如果段落中只涉及三到四个简单的句子，如同例 6 和例 7，因为段落比较短，就不太需要结尾句了。

上述提到第三种形式的段落，结尾句的运用可能不太常见。特别是在描述实验方法的段落中，结尾句是不必要的。对于那些描述行为或者随着时间推移的过程的段落，结尾句通常只涉及第一步和最后一步就可以了，也可以对中间的部分进行一个简单的说明。

练习 4.3

请给练习 4.2 中的句子加上结尾句使段落更完整。

4.2 连贯表达

结构的完整性是一个有效段落的必备要素，但是一个精彩段落还必须具备另外两个要素：第一，两个句子之间的无缝衔接；第二，一个段落中所有句子的视角一致。

4.2.1 句子衔接

读者通常喜欢句子之间衔接很紧密的段落，即当前句子的观点看似是从前面句子的观点中自然产生出来的。为了说明这一点，请参考例 8a 和 8b，这两个段落的主题句是一样的，但是第二句不一样。

（8a）Clinical psychologists have searched for variables that would identify people at risk for suicide. Biological markers such as genotypes as well as behavioral markers such as suicidal thoughts have been studied by scientists.

（8b）Clinical psychologists have searched for variables that would identify people at risk for suicide. They have studied biological markers such as genotypes as well as behavioral markers such as suicidal thoughts.

大部分的读者都会觉 8b 会比 8a 要更容易理解。类似的例子，见 9a 和 9b，也是第二句不同。

（9a）People make inferences about other people from their facial expressions. They often use facial expressions to draw inferences about personality, health, and mood.

（9b）People make inferences about other people from their facial expressions. Personality, health, and mood are some of the domains in which they draw inferences from facial expressions.

在上述例子中，大部分读者都会认为 9b 比 9a 更容易理解，并且更加流畅。这是为什么呢？因为 9b 和 8b 都是以前一句中提到的信息作为开头，然后引出新的信息。在 8b 中，第一句介绍心理学家们在寻找可以预测自杀行为的因素，接着第二句的主语和谓语

（They have studied）是第一句中提到过的。然后，新的信息（biological 和 behavioral markers）才出现；生物和行为标志（biological and behavioral markers）是第一句中心理学家研究的对象。相反，在 8a 中，第二句以新的信息开头（specific markers），但是它的意思并不明确，直到看到整个句子的最后几个单词（have been studied by scientists）可能才会明白。

这个用熟悉的信息开头，引出新信息的原则，可以解释为什么 9b 比 9a 更容易理解。在这两个例子中，第一句话阐述了人们容易根据他人的面部表情进行推测。在 9b 中，第二个句子以这个观点（They often use facial expressions）开头，然后引出人们具体利用面部表情推测什么。相反，9a 以新的具体的推测范围开头，这些推测范围的意义直到读到后半句才清楚。

以人们熟悉的信息开头引出新的信息，因读者已有一定的背景知识，可以产生更加流畅的感觉。换句话说，新的信息可以从读者已经阅读的部分中衍生出来，这样就会使句子衔接得更加紧密。另外，把熟悉的信息放在句首，把新的信息放在句末，还有一个好处就是可以对新出现的信息起到强调作用。

使用熟悉的名词化结构和被动语态对于贯彻这一原则很重要。例如：

(10) Scientists have used rhythm to classify languages into those that are stress timed, syllable timed, and mora timed. This *classification* helps to explain how infants exposed to two languages learn to distinguish those languages.

在例 10 中，名词化结构 classification 的运用非常好，因为它概述了第一个句子的内容，这样使第二个句子是以人们熟悉的信息开头。

(11) When humans point to the location of hidden food, great apes search for food in that location. This *result* suggests that primates other than humans are able to comprehend social cues such as gesture.

单词 result 既可以作名词，也可以作动词。在例句 11 中，用 result 来简述第一个句子非常好。因为 This result 包含了整个第一句话的意思，非常简洁。换句话说，我们可以用 This result suggests 来代替 The fact that great apes search for food in a location pointed to by adults suggests。

使用被动语态也可以使句子以熟悉的信息开头。例如 12a：

（12a）"Scary smart" individuals often make substantial contributions to literature, science, and the arts. Scores on intelligence and achievement tests identify such "scary smart" individuals, sometimes by early adolescence.

这个例子中，第二句是以一个新的信息 score 开头的。相反，我们看下面的例子 12b：

（12b）"Scary smart" individuals often make substantial contributions to literature, science, and the arts. These individuals are often identified by early adolescence, using scores on intelligence and achievement tests.

这个例子中的第二句通过使用被动语态，以熟悉的信息作为句首（These individuals are often identified...）。

类似地，例子 13a 的第二句由于是以新的信息开头，使得这句话不太好理解。例子 13b 运用被动语态对这个句子进行了修改。

（13a）Members of stigmatized groups often use strategies to create favorable impressions with other people. When other people seem to be stereotyping them, stigmatized individuals implement these strategies.

（13b）Members of stigmatized groups often use strategies to create favorable impressions with other people. These strategies are implemented when stigmatized people believe others are stereotyping them.

名词化和被动语态可以使句子以熟悉的信息开头，但是这个方

法并非任何地方都可以用，因为这种表达方式并不是一种好的讲故事的方法，它使读者很难辨别出故事的主人翁和他们的行为。因此，这里需要提醒大家，本书推荐的一些方法需要灵活加以运用，否则就会自相矛盾。

练习 4.4

修改下面每个段落中的第二个句子，使段落表达更加连贯。

1. When people read, they fixate briefly on a word and then move on to the next word. Less skilled readers tend to fixate on words longer than skilled readers do.
2. People who believe they are vulnerable to disease rely on heuristics to minimize their risks. Seeing themselves as more introverted (i.e., needing less social stimulation) and moving away from stimuli suggesting the presence of disease are typical heuristics.
3. If there are domain-general resources, then performance on verbal tasks should be impaired when people perform a visual-spatial task simultaneously. Studies of Austrian, Belgian, and German undergraduates have reported this outcome.

然而，有些段落的句子之间本身就很难相互承接。例如，当需要描述一系列的事件，每一个步骤有不同的内容，这样就很难使第二个句子以第一个句子中的信息开头。下面的例子 14a 就呈现出了这样的问题。

（14a） Experimental trials involved four events. A fixation circle appeared at the center of the screen for 500 ms. The stimulus array appeared for 100 ms and was followed by a masking stimulus for 300 ms. Participants reported the orientation of the target in the stimulus array.

在这个例子中的连词，例如，then、next、finally、first、second 和 third 等，可以呈现出顺序关系，使用这些词汇使读者认识到这些句子是按照次序衔接的，而不是按照具体的内容衔接的。例子 14b 表明加上这些表示顺序的词可以使段落的句子衔接紧密。

（14b）Experimental trials involved four events. *First*, a fixation circle appeared at the center of the screen for 500 ms. *Then* the stimulus array appeared for 100 ms and was followed by a masking stimulus for 300 ms. *Finally*, participants reported the orientation of the target in the stimulus array.

First、then 和 finally 这些词为读者提供了清晰的关于事件发生的线索，使文章看起来很流畅。

另一种不能使句子之间很好衔接的情况是，当你需要对比两个观点或者假设的时候，你需要在段落中间改变方向。介绍第一种观点可以运用先前介绍的方法来增加流畅性。当需要介绍第二种观点的时候，有些词汇，例如，however、in contrast 和 alternatively，可以给读者一个信号，表示你要开始写一个新的观点了。（on the other hand 也可以使用，但是注意一定要跟 on the one hand 一起用）。例子 15a 就是因为没有使用信号词，而使读者感到很疑惑。

（15a）Personality disorders remain poorly understood. They may represent a distinct clinical syndrome that differs qualitatively from typical personality function. They may represent extreme variations of typical personality function that are maladaptive.

例句 15b 通过添加连接词，使句子显得更加的流畅。

（15b）Personality disorders remain poorly understood. *On the one hand*, they may represent a distinct clinical syndrome that differs qualitatively from typical personality function. *On the other hand*, they may represent extreme variations of typical personality function that are maladaptive.

这个例子中，on the one hand 和 on the other hand 使读者清楚地找到第一种观点和第二种观点。

练习 4.5

在下面的句子中增加连接词来使段落表达更加连贯。

1. The experiment included several phases linked by a cover story that

the experiment concerned taste preferences. The participant was seated with two confederates and asked to complete questionnaires concerning mood and taste preferences. While waiting for the experimenter to return, one confederate took a toy from a shelf and began throwing it to others; the participant received 5 percent of the throws in the ostracized condition but 33 percent in the included condition. The participant was asked to choose a type of hot sauce for a stranger; choices were labeled *mild*, *medium*, and *hot*.

2. According to life-history theory, individuals differ in how they allocate resources to offspring. In a "fast" strategy, more offspring are produced but parents invest relatively less time and energy in their offspring. This strategy is more common when the environment is harsh, such that offspring may not survive. In a "slow" strategy, fewer offspring are produced and parents invest more time and energy in their offspring. This strategy is typical when the environment is supportive, such that offspring usually survive. Strategies are matched to the environment where parents and offspring live.

4.2.2 视角一致

句子之间紧密的衔接可以使段落看起来很流畅，但是仅仅做到这一步是不够的。例如：

(16) Speech perception involves not only audition but vision. Vision's impact on speech perception is evident in the McGurk effect, in which an audio track presenting *bah* is dubbed onto a video of a speaker saying *gah*, which a listener "hears" as *dah*. This perceptual error is less common in children with specific language impairment and in children with autism spectrum disorder. These disorders have been considered distinct but often involve overlapping deficits in language. This impaired language often leads to problems in academic success and in relationships with peers.

这段话中的句子之间的衔接很紧密，因为下一句都是以上一句中的信息为开头的。但是所有的句子加在一起就让人觉得读不懂，

它更像是幻想音乐家根据意识流写出来的抒情诗。

下面的例子 17a 中也出现了同样的问题。

(17a) When people are trained to focus their attention by meditating, their performance improves on many tasks. For example, meditation training is associated with improved reading comprehension and more efficient attention. In addition, older adults trained in meditation recall more on memory span tasks. In both cases, meditation training helps reduce the influence of distracting stimuli that often undermine performance.

从结构上来说，17a 以主题句开头介绍冥想训练的好处，紧接着列举了两个例子，最后一句解释了冥想训练好处的两个内在过程。尽管 17a 结构很清晰，但是读起来还是觉得不那么流畅，为什么？下面的例子 17b 给出了一些线索。例子 17b 和 17a 的第一句、第三句都是一样的，但是第二句和第四句有些不同。

(17b) When people are trained to focus their attention by meditating, their performance improves on many tasks. *For example, following meditation training, college students comprehend more of what they read and attend to stimuli more efficiently*. In addition, older adults trained in meditation recall more on memory span tasks. *In both cases, individuals trained in meditation are better able to ignore distracting stimuli that often undermine performance.*

与 17a 相比，17b 采用了一致的视角，每一句话都站在学习冥想的人的角度进行描述。而 17a 中第一句和第三句以进行冥想的人为主语，而第二句和第四句则以冥想训练这一抽象概念为主语。这两种角度的切换（people vs. abstraction）使读者感觉很不流畅。

18a 和 18b 两个例子也说明了同样的问题。

(18a) Following the death of a child, some parents shield their own grief from their spouse. Concealment of emotions is typically associated with greater experience of grief, not less. Apparently the effort parents invest in hiding their grief limits their ability to cope with that grief.

这个段落的表述不是很流畅，因为第一句和第三句是从个人经验的角度写的，但是第二句又以抽象的概念为开头。18b 读起来就好很多，因为它采用了同样的视角，即对第二句进行了修改，也从个人经验的角度来写。

(18b) Following the death of a child, some parents shield their own grief from their spouse. When parents hide their emotions in this way, they typically experience greater grief than if they had expressed their sense of loss. Apparently the effort parents invest in hiding their grief limits their ability to cope with that grief.

段落 18b 读起来就很流畅了，因为它讨论的角度都是从父母处理不幸的行为这一方面着手的。换句话说，当一个段落的每句话所涉及的内容与主题句的观点视角保持一致时，读者看起来会觉得更流畅。那么要判断一个段落中句子的视角是否一致，办法就是比较它们的主语。当句子视角一致时，它们通常有相似的主语。例如，在 17b 中，句子的主语是 people、college students、older adults 和 individuals。

练习 4.6

修改下面段落中的句子，使它们视角一致。

1. Sleep allows fragile memories to consolidate. This benefit is evident in memory for a range of materials, including emotions, textures, and speech. The converse is also true: When people are deprived of sleep, they often remember less accurately.
2. When intervention programs foster children's social-cognitive skills, children are less prone to antisocial behavior as adolescents. Such intervention programs work because they reduce hostile-attribution bias. And they have long-term effects: Antisocial behavior is reduced years after the intervention is over.

4.2.3　长度

写作时还有一个注意的要点是段落的长度。对于之前介绍过的

三种展开段落的方式，一般来说四到七个句子是比较合适的。例如，运用列举法展开的段落，六个句子中，有四句是支持主题句的，再加上一个主题句，一个结尾句，通常四句话足够证明主题句的观点。超过四句就会使段落看起来过长，且不能让观点更加具有说服力。

四到七句这样的长度对于进行比较不同的观点和描述随时间推移过程的段落来说，也是可以的。例如，一个包括六句话的段落，除掉主题句和结尾句，每个观点可以用两句话来说明。一个七句话的段落，有一句是主题句，每个观点用三句话说明，不用结尾句。描写过程的段落，如果有六句，那么其中一句是主题句，剩下的五句用来描述五个步骤。如果步骤超过五步，最好就把所有的步骤分为两个不同的部分，再分段描述。

练习 4.7

修改以下过于冗长的段落。

1. Cultures differ in their cognitive style, with Western individuals and East Asian individuals typically relying on analytic and holistic styles, respectively. On attention tasks, Westerners tend to focus on salient objects, but East Asians focus on relationships of objects. When categorizing objects or events, Westerners emphasize a single dimension, but East Asians emphasize overall similarity. In explaining people's behavior, Westerners stress traits of individuals, but East Asians stress the role of the situation. In reasoning, Westerners tend to be more analytical, but East Asians are more dialectical. Having observed others perform tasks, Westerners are more likely to perform the task"their own way," but East Asians often imitate what they've seen while observing others. In judging cause-effect relations, Westerners place greater emphasis on immediate causes, but East Asians place greater emphasis on more distal causes. Finally, in predicting the future, Westerners see the world as stable and expect current trends to continue, but East Asians see the world as changing and anticipate that current trends may be reversed.

2. According to the social information processing model, people's responses to social stimuli represent the product of several steps of processing. First, people attend selectively to certain features of the social stimulus but ignore other features. Second, they interpret the social stimulus—they try to understand what it means. Third, people evaluate their goals for the situation. Fourth, they retrieve from memory a behavioral response that fits the situation and their goals. Fifth, people decide if that response is appropriate. Six, if the response is appropriate, they enact it; otherwise, they search for another response. Seventh, they monitor how others respond to their behavior and, if necessary, update their database of behavioral responses.

当然由于有些段落的中心思想比较复杂，所以它们比一般的段落要长一些。一般来讲，不要让你的段落比普通段落长或者短很多。读者更容易觉得比普通段落长很多的论文很难懂，一部分原因可能是段落太长让读者理不出结构。但是太短的段落同样也不行，读者会觉得段落没有完全展开，并质疑你为什么不多说点有关主题的内容。

小结

1. 对于一个好的段落，其结构应该是：第一句是观点明确的主题句，紧跟着的是几句对主题句的说明。
2. 使文章更流畅的方法是句子之间紧密连接（通常是采用熟悉的信息作为句子的开头），段落中所有句子采用一致的视角。
3. 保持每个段落适当的长度，一般包括四到七个句子，段落过长或者过短都不好。

课外练习

1. 只阅读引言中每个段落的主题句，看看它们是否能展现作者想要表达的主旨？如果不能，请对它们进行修改。

2. 找出那些要么因为句子之间衔接不好，要么因为句子之间没有一致的视角而导致的表达不连贯的段落，并对其进行修改。
3. 找出那些在引言或者结论部分看起来比别的普通段落长很多或者短很多的段落。它们是不是写得不合适？为什么？

练习答案

练习 4.1

1. 主题：portion size; 中心思想：it influences how much food people eat.
2. 主题：landmarks; 中心思想：they help individuals orient to an environment and serve as markers for object locations.
3. 主题： children who experience lower-quality maternal care; 中心思想：they respond less adaptively to stress.

练习 4.2

1. Trait and state anxiety affect attention through different mechanisms. Trait anxiety is a by-product of an individual's personality and thus should affect attention through top-down processing. In contrast, state anxiety is linked to characteristics of specific situations and consequently should affect attention through bottom-up processing.（比较）
2. According to this model, experiencing darkness leads people to believe they are relatively invisible. In other words, darkness makes people feel anonymous. Consequently，in darkness people are more often dishonest and selfish.（描述随时间推移的某种过程）
3. In health research, one of three measures is used to evaluate the life-saving impact of treatments. The simplest is the number of lives saved. Another is the number of life years gained. A third is the number of high-quality life years gained. （提供论据）

练习 4.3

1. Trait and state anxiety affect attention through different mechanisms. Trait anxiety is a by-product of an individual's personality and thus should affect attention through top-down processing. In contrast,

state anxiety is linked to characteristics of specific situations and consequently should affect attention through bottom-up processing. *In other words, trait anxiety affects attention through top-down processes, but state anxiety affects attention through bottom-up processes.*

2. According to this model, experiencing darkness leads people to believe they are relatively invisible. In other words, darkness makes people feel anonymous. Consequently, in darkness people are more often dishonest and selfish. *Thus, darkness leads to anonymity, a process that then leads to unethical behavior.*
3. In health research, one of three measures is used to evaluate the life-saving impact of treatments. The simplest is the number of lives saved. Another is the number of life years gained. A third is the number of high-quality life years gained. *In summary, outcome measures include the number of lives saved along with life years gained and the number of quality years lived.*

练习 4.4

1. When people read, they fixate briefly on a word and then move on to the next word. These fixations tend to be longer in less skilled readers than in skilled readers.
2. People who believe they are vulnerable to disease rely on heuristics to minimize their risks. Typical heuristics include seeing themselves as more introverted (i.e., needing less social stimulation) and moving away from stimuli suggesting the presence of disease.
3. If there are domain-general resources, then performance on verbal tasks should be impaired when people perform a visual-spatial task simultaneously. This outcome has been reported in studies of Austrian, Belgian, and German undergraduates.

练习 4.5

1. The experiment included several phases linked by a cover story that the experiment concerned taste preferences. *First*, the participant was seated with two confederates and asked to complete questionnaires concerning mood and taste preferences. *Next*, while waiting for the experimenter to return, one confederate took a toy

from a shelf and began throwing it to others; the participant received 5 percent of the throws in the ostracized condition but 33 percent in the included condition. *Finally*, the participant was asked to choose a type of hot sauce for a stranger; choices were labeled *mild*, *medium*, and *hot*.

2. According to life-history theory, individuals differ in how they allocate resources to offspring. In a "fast" strategy, more offspring are produced but parents invest relatively less time and energy in their offspring. This strategy is more common when the environment is harsh, such that offspring may not survive. *In contrast*, in a "slow" strategy, fewer offspring are produced and parents invest more time and energy in their offspring. This strategy is typical when the environment is supportive, such that offspring usually survive. *Thus*, strategies are matched to the environment where parents and offspring live.

练习 4.6

下面每道题的答案都采用了两种方法来编写。一种更强调段落的结构，一种更强调视角。

1. Sleep allows fragile memories to consolidate. This benefit is evident in memory for a range of materials, including emotions, textures, and speech. The converse is also true: Sleep deprivation is associated with less accurate retention. OR

During sleep, people's fragile memories consolidate. They have better memory for emotions, textures, and speech. The converse is also true: When people are deprived of sleep, they often remember less accurately.

2. Interventions designed to improve social-cognitive skills can reduce antisocial behavior during adolescence. Such intervention programs work because they reduce hostile-attribution bias. And they have long-term effects: Antisocial behavior is reduced years after the intervention is over. OR

When intervention programs foster children's social-cognitive skills, children are less prone to antisocial behavior as adolescents. These programs work because participating children are less prone to

interpret other people' s actions as reflecting hostile intent. And they have long-term effects: Children are less prone to antisocial behavior years after the intervention is over.

练习 4.7

1. 这个包括了八个句子的段落提供了七项西方人和东方人思维方式不同的例子，显得太过冗长。我删掉了这个句子：Westerners tend to be more analytical, but East Asians are more dialectical，因为这个句子和观点句重复了。我还删掉了这个句子：Have observed others perform tasks, Westerners are more likely to perform the task "their own way", but East Asians often imitate what they have seen while observing others。因为这个例子并不能用一句话完整地表达出来。这样就只剩下五个句子了，我加了一个结尾句，就构成了下面的段落。

Cultures differ in their cognitive style, with Western individuals and East Asian individuals typically relying on analytic and holistic styles, respectively. On attention tasks, Westerners tend to focus on salient objects, but East Asians focus on relationships of objects. When categorizing objects or events, Westerners emphasize a single dimension, but East Asians emphasize overall similarity. In explaining people's behavior, Westerners stress traits of individuals, but East Asians stress the role of the situation. In judging cause-effect relations, Westerners place greater emphasis on immediate causes, but East Asians plate greater emphasis on more distal causes. Finally, in predicting future outcomes, Westerners see the world as stable and expect current trends to continue, but East Asians see the world as changing and anticipate that current trends may be reversed. Thus, across a range of perceptual, cognitive, and reasoning tasks, Western thinking is relatively analytic, but East Asian thinking is relatively holistic.

2. 这个包括八句话的段落有一个主题句，之后跟了七句话来描述一个模型的七个步骤，这七个步骤都非常重要，删掉任何一步都会影响到对内容的理解，所以我并没有像上一题一样，采用删除的方法。而是把它们分成了两个段落。第一个段落主要描述和刺激有关的步骤，第二个段落主要描述和反应有关的步骤。

According to the social information processing model, people's

responses to social stimuli represent the product of several steps of processing. The initial steps involve encoding a stimulus. First, people attend selectively to certain features of the social stimulus but ignore other features. Second, they interpret the social stimulus—they try to understand what it means. Third, people evaluate their goals for the situation.

Having interpreted a situation, processing now shifts to determining an appropriate response. First, people retrieve from memory a behavioral response that fits the situation and their goals. Second, they decide if that response is appropriate. Third, if the response is appropriate, they enact it; otherwise, they search for another response. Fourth, they monitor how others respond to their behavior and, if necessary, update their database of behavioral responses.

第 5 讲

如何写好引言

撰写一个好的研究报告必须具备，第 1 讲到 4 讲中介绍的写好一个句子和段落的写作技巧。这些技巧在引言的写作中显得格外重要。如果引言不能很好地阐述这个研究的合理性，那么编辑就可能会拒稿。事实上，很多编辑和审稿人都是通过稿件的引言部分来对稿件进行初步的评价，他们会提出这样一些问题：文章中探讨的问题具有时代性吗？是这个领域的关键性问题吗？作者采用了新颖的研究方法吗？提供了全新的视角吗？研究使用的方法能不能很好地解决提出的问题？如果审稿人在读完引言之后，发现自己得到的回答“不是”比“是”多的话，那么就算实验得到的结果牢不可破，他们也不会对这篇文章抱有很高的热情。为什么会这样呢？因为没有人会对回答了一些无关紧要的问题的“重大发现”感兴趣。因此，相比稿件的其他部分，在这个部分投入更多的时间和精力是相当有必要的。

引言包括三个部分：第一部分是介绍你的研究主题，并解释它的重要性；第二部分是叙述与你研究主题相关的那些研究；第三部

分是提出你的研究假设，并说明如何验证这些假设。

5.1 阐述研究问题并吸引读者

引言的第一部分通常是由一到两个段落构成，这一部分主要是介绍你的研究主题，同时唤起读者的好奇心。你可以用第一段来说服读者你的文章与每年心理学杂志中成千上万的文章都不相同，当然还有更多的没有发表出来的文章。

研究报告大多是以描述相关文献的研究现状开头，例句 1a 就是这样的一个例子：

(1a) Social psychologists have studied many types of cooperation but have ignored interactions that require physical cooperation.

这样的方式会使你的稿件看起来平淡无味。更好的策略是用人们（或者动物）及他们的行为开头。也就是描述人们熟悉的却不太理解的行为。如例句 1b：

(1b) When people enter a building, others often hold the door for them. Although such interactions are commonplace, we know little about forms of social interaction like these that involve physical cooperation.

例句 1b 通过描述一个所有读者都熟悉的例子来引入主题。读者不能完全理解自己熟悉的现象，因此能够吸引他们的兴趣。

另外一种有效的策略是用修辞性疑问句（反问、设问）来引起读者思考。例句 2a 是一个单纯叙述文献的例子：

(2a) In a review of the literature on choice overload, Harris, Becker, and Hall (2010) concluded that people enjoy having many alternatives from which to choose, yet they often find such choices less satisfying.

例句 2b 是利用设问的修辞手法对 2a 进行修改后的句子：

(2b) Suppose you want to buy a new camera. Would you prefer to shop at a store that has three cameras in your price range or a store that

has twelve? Research on choice overload suggests you will prefer the store with more choices but be less satisfied with a camera purchased there (Harris, Becker, & Hall, 2010).

第三种有效策略是使用有趣的统计结果或事实作为开头。例句 3a 是一个以直截了当却平淡无奇的方式介绍文章主题的例子：

(3a) Research on the cognitive processes underlying reading has focused on reading English, which is problematic because English is an unusual language in that spellings and sounds are not linked consistently (Moreau, Horvat, Mertens, & Gruber, 2008).

相反，例句 3b 以一个统计结果开头，这个结果呈现了阅读英语的人口数量和进行英语阅读研究的成果数量之间的不平衡：

(3b) Less than 10 percent of the world's population reads English, yet most research on reading has involved English-speaking readers (Olsen & Nagy, 2012); this is potentially problematic because English is an unusual language in that spellings and sounds are not linked consistently (Moreau, Horvat, Mertens, & Gruber, 2008).

这些方法之所以经常能够吸引读者，因为它们涉及人们的行为、想法和感受，这些正是心理学所关注的问题。换句话说，文献的最终目的是让我们理解为什么人们会有那样的行动、思考和感受。因此，在引言开始部分强调人们的行动、思考和感受会比强调文献好。

使用好的例子、修辞手法或者是有趣的事实这些方法能够吸引读者的另外一个原因是：它们能够提高你的研究的影响力。对于大多数主题，关注你的研究的读者中只有少数是真正的专家，即使你的引言部分写得还不如电话本有趣，他们也会阅读你的文章。但是还有另外两类重要的读者群体。第一类群体就是那些不研究你的主题的研究者，但由于你的主题与他们的研究领域有一定的关系，因此试图跟踪你的研究主题。另外一类是对你的研究不感兴趣的研究者。你们的研究主题只在某种程度上属于同一个心理学分支，但它们还是相距甚远，因此他们通常都不太关注你的文章。例如，如果你的文章探讨了工作场所中个性对于破坏性行为的影响，这个领域

的专家肯定会阅读它，研究机能失调组织的研究者可能会阅读它，然而，研究协商的心理学家很有可能忽视它。一个引人注目的引言可以吸引后两个读者群体，从而大幅度地扩大你的读者数量。

练习 5.1

通过增加例子、修辞性疑问句或吸引眼球的事实来修改以下引言的句子。

1. Research on memory shows that emotion-laden events are remembered more accurately than neutral events, but the relatively accuracy of recall of positive versus negative events is not well established.
2. Studies of the impact of a group's heterogeneity on performance suggest benefits (e.g., different perspectives yield greater creativity) as well as drawbacks (e.g., greater effort involved in coordinating diverse workers).
3. Many studies have been conducted to determine whether workplace wellness programs are most effective when they reward employees for healthy behavior or penalize them for unhealthy behavior.

5.2 描述和评价相关知识

引言的这个部分是至关紧要的，因为它为你的研究奠定了基础。换句话说，在这个部分，你阐述了你的研究的合理性。常见的方法是：阐述什么问题是大家知道的、什么是大家还不知道的、或者什么问题是还存在争议的。

你可以用不同的形式来撰写这个部分，这需要视不同的研究类型而定。通常情况下，论文报告的是一种全新的现象或效应，或是提供更好地理解一种现象的证据，或是检验某种现象的另一种解释（Kendall, Silk, & Chu, 2000）。所有的这些研究都能通过各自独特的论据来引出，但是通常比较合理的做法是阐明什么是已知的，什么是未知的，然后聚焦于你的研究主题。

不管你的论文报告的是哪种类型的研究，写作这个部分开头的一个好方法就是简明扼要地列出你的各个论点。例如，段落 4a 包括四个步骤，这些为研究“攻击性的青少年是如何通过面部表情来解释情绪的”提供了论据。

（4a）

a. Facial expressions are cues to people’s behavior.

b. Aggressive teens misinterpret these cues (hostile bias).

c. These teens can be trained to interpret facial expressions more accurately.

d. Evidence is weak—little external validity.

接下来，运用第 4 讲中写好段落的方法，把这些论点转化成主题句。

（4b）

a. People often use others’ facial expressions to understand their behavior.

b. Most people are reasonably accurate in the inferences they draw from others’ facial expressions, but aggressive adolescents are not: They tend to infer hostile intentions from neutral or ambiguous facial expressions.

c. Intervention studies have been successful in teaching aggressive adolescents how to interpret others’ facial expressions more accurately.

d. Despite the success of intervention studies, there is no evidence that the improved recognition of facial expressions generalizes to adolescents’ interactions with families and peers.

下一步就是用一到两个段落来充实每一个主题句。例如，4b 中例句 c 后面可以紧跟一些句子来描述已有的各式各样的干预性研究；例句 d 后面紧跟的句子可以陈述，以往的干预研究大部分都是仅仅在实验环境中关注青少年面部表情识别。

练习 5.2

从网上找一篇文章，将引言以“逆向工程”方式找出作者的基本观点。换句话说，列出作者论证的步骤，并写出主题句。

当你撰写这些段落的时候，遵循以下一些基本规则很重要。

5.2.1 把研究的问题、想法和结果作为重点，把研究和研究者作为背景

当你在综述以往研究时，是通过研究问题来组织它们，而不是研究本身或研究者，这样你的论证会更有效。换句话说，你需要阐述什么是已知的，以及什么是未知的。而这些描述应该是基于事实导向，而非基于研究导向。以 5a 为例，它是基于研究导向来描述文献的。

(5a) There is an extensive literature on gender differences in mathematical performance. Schneider (2000) presented a range of addition and subtraction problems to first and second grade students; girls responded more accurately and faster than boys. Murphy (2011) reported that for seventh graders taking the mathematical part of the Scholastic Aptitude Test, which measures mathematical reasoning, boys had a mean score of 416 compared to a mean of 386 for girls. Sordi (1987) found that, for sixth-grade students, boys had greater scores than girls on the mathematical problem-solving scale of the Canadian Test of Basic Skills. Bast (2013) tested third to sixth graders on a range of arithmetic tasks, including subtraction, multiplication, and numerosity comparison; in all cases, girls outperformed boys.

以上段落引用了四项研究，每项研究都是围绕儿童的年级、任务和研究发现有关的内容展开的。但是这样写让读者很难读懂，并且读者还需要去分析这些研究发现。相反，段落 5b 就是一个研究结果导向的例子，它总结了当前研究的状况，同时引用了相关文献。

(5b) There is an extensive literature on gender differences in mathematical

performance. Boys typically achieve greater scores on measures of mathematical problem solving (Murphy, 2011; Sordi, 1987), but girls have greater scores on tests of arithmetical computation (Bast, 2013; Schneider, 2000).

然后再运用一些我们之前几讲中介绍的技巧，可以在一个句子里就把所有内容都概括进去，如 5c：

(5c) A paradox in the study of mathematical cognition is that boys typically achieve greater scores on measures of mathematical problem solving, but girls have greater scores on tests of arithmetical computation (Murphy, 2011; Schneider, 2000).

当然，一篇引言中总有一两个研究是十分关键的。那么你需要把这些研究叙述得详细一些，但这只是例外情况。一般情况下，当你对文献作一个总体概括时，应该把研究本身当作背景，而强调它的研究发现。

练习 5.3

修改以下段落，使得研究的发现凸显出来。

1. Skill at learning a second language (L2) depends on several factors. Wilson (2009) showed that adults with greater phonetic ability were better at learning a second language. Joyner (2007) reported a significant correlation between L2 skill and grammatical sensitivity. DeWolff (1987) found that scores on a phonological memory task predicted performance on a simulated language-learning task.
2. The effects of cognitive load on performance are inconsistent. López (1988) reported that participants made more errors on an arithmetic task when they were simultaneously generating letters randomly. Kim, King, Novak, and Campbell (2000) found that adolescents were slower to judge whether a stimulus was a letter when they were also monitoring a series of words for the presence of a target word. However, Hester, Fischer, and Lee (1990) showed that golfers putted more accurately when they were also judging whether background tones were high or low pitched. Moore and Turner (2011) demonstrated more rapid learning of perceptual categories when participants were also remembering a sequence of digits.

5.2.2 客观地叙述文献

当介绍与你的研究主题相关的研究时，要客观、完整地进行。对相关文献带有偏见和不够完整的综述，通常会让你的读者产生反感。换句话说，读者很容易发现你忽略了那些与你研究不相符的观点。

在描述文献的时候，保持客观性是非常有必要的。例如，指出前人研究的不足是没有问题的，但是你在批判时必须保持客观，不能带有个人偏见，比如你不能去评论研究者，而应该评论研究本身。一个好的文献综述能够简洁地把所有必要的内容都叙述清楚，并且使读者了解这一问题的方方面面。

5.2.3 引用文献的时候要有选择性、代表性，而不是穷尽一切地列举文献

当你在论证中综述文献时，你也许想要把这个领域的全部或者大部分文献都引用上。请不要这样做！这样做会导致三个问题。第一，只有综述类文章才会这样做，而在实证论文中，你的文章的这部分不是用来介绍引用的文献本身，而是为你的研究建立逻辑基础和实证依据。因此，你只需要为你的每个论点找到最合适的论据，而不必把所有的论据都引用出来。换句话说，就算你引用了五个甚至十个论据，也不一定会比引用两到三个论据更具有说服力。第二，许多杂志限制了参考文献的数量，这使得你不得不有选择性地引用文献。例如，*Psychological Science* 上的文章不能超过 30 篇参考文献。第三，一般在引用参考文献时，会包括作者和出版的时间等信息，这些会干扰读者理解你的文章。例如，例句 6b 比例句 6a 更加容易读懂，也更加简短。

(6a) Early and late in life, people are prone to perseverative errors: Infants search for an object where it was hidden previously despite seeing it hidden elsewhere, and elderly adults sort cards using an old rule that has since been replaced.

(6b) Early and late in life, people are prone to perseverative errors (Kowalski, Allen, Hill, & Flores, 2002, 2009; Hernández, Walker,

& Hansen, 1975): Infants search for an object where it was hidden previously despite seeing it hidden elsewhere (Hughes, Long, & Foster, 1999; Parker & Stewart, 2010; Taylor, Campbell, & Tanaka, 1999), and elderly adults sort cards using an old rule that has since been replaced (Meyer, Schmidt, & Durand, 2005; Rivera & Cook, 2008).

一般来说两篇文献的引用就应该足以支撑你的一个论点；三个或者更多的话就可能太多了。当选择引用文献时，选用一篇最新的同样主题的综述是一个不错的选择。如果找不到最新的综述，你可以引用稍微早一些的综述加上最近的一些研究。只有当你自己的文献提供了直接且最好的证据，才能随意地引用它。审稿人一般会对作者无端地引用自己的文章而感到不满。

由于引用不是论点本身的一部分，我建议你把它们一起放在句子的结尾，而不是分散在句子中，正如例句 7a 一样。

(7a) Some of the factors that influence how people vote include their values (Peeters, Jackson, & Carter, 1992), demographic features (Dubois & Anderson, 2004), and the presence of negative affect like fear or anger (Moore & Hernández, 2013).

像例句 7a 这样把引用分开会阻碍读者阅读，他们在阅读这种句子时，必须保持头脑清晰，并分清哪些才是你的文章的主体内容。相反，像例句 7b 一样把所有的引用放在句末，读者在阅读你的文章时，思路就不会被引用的文献打乱。

(7b) Some of the factors that influence how people vote include their values, demographic features, and the presence of negative affect like fear or anger (Dubois & Anderson, 2004; Moore & Hernández, 2013; Peeters, Jackson, & Carter, 1992).

这种做法就是，你在文章中对支持的证据进行简短概括，从事这个领域研究的读者可以把它们联系起来。而对于其他读者就算你把文章写得通俗易懂，他们也会不在乎或心存感激。请注意，如果你在写这部分的时候是为了对比两种不同的观点或者假设，你就应当把这些引文分开来，因为它们支持不同的观点。

许多缺乏经验的作者可能会对选择性地引用文献感到担心，他们害怕这样做得罪文章的审稿人。换句话说，他们担心如果没有引用 Evans，Rossi 和 Van Dyk（2013）的文章，而 Evans、Rossi 或者 Van Dyk 正好就是他的审稿人，审稿人可能会因此拒稿。根据我个人的经验，你不必担心这些。正如之前所讲的，审稿人关注的是你有没有客观地引用文献，而不会非要求你引用某些人的文章。他们可能会建议你多引用一些文献。如果编辑也建议你这么做，并且你的稿件引用的文献相对较少的话，增加两到三个是完全没有问题的。

5.2.4 叙述或是重申你的研究假设，并把它们和你的研究设计联系起来

引言的最后一到两段的作用就是，呈现你的研究假设和预期，并且与你的研究设计联系起来。通常情况下，在引言的前面两个部分，你很可能已经陈述了你的研究假设，那么这个部分只是为了提醒读者你的假设。然而，这个部分最重要的作用在于向你的读者说明你的研究方法是如何验证这些假设的。

我们回到前面 4a 的例子，这个研究要探讨的是在实验室背景下，攻击性青少年面部表情识别能力的提高，是否能够运用于与家人和同伴的交往中。论证部分作者已经指出，攻击性青少年通过学习，可以更准确地识别面部表情，但是大部分研究都是在有限的情境中来评估这种学习效果，例如在静态图片中识别面部表情。因此，最后一段的目的就是提醒读者研究目的，以及解释如何检验。在这个例子中，研究目的是探讨青少年的学习是否可以推广至社会交往中。例子 8 列举了一种可能的写作方式：

(8) The aim of the present work was to determine whether adolescents' improved recognition of facial expressions following training would generalize to a more realistic setting. Aggressive adolescents were assigned randomly to either a control condition or an intervention condition. In the latter, adolescents were trained to distinguish photos depicting individuals who look happy from those who look angry. Following training, all participants judged whether facial expressions depicted happiness or anger in still photographs of novel

adults and then in brief videos (with audio omitted) of unfamiliar adolescents interacting with an adult. If training is effective and generalizes beyond the immediate training environment, then adolescents who participated in the training condition should judge facial expressions in novel photos and in the videos more accurately than do adolescents in the control condition.

需要注意的是，例子 8 以叙述这个实验目的为开头，紧跟着介绍实验方法的三个句子，最后以预期结果为结尾。

在例子 9 中，引言的论证部分已经阐述了，青少年和成年人的执行功能包括三个组成部分，但是幼儿的执行功能发展得还不完善。

(9) The present study was conducted to determine whether the structure of executive function changes during childhood. Children at two ages—4 and 8 years—were tested on tasks measuring the inhibitory, shifting, and updating components of executive function that are found with adolescents and adults. We expected that the pattern of correlations across tasks would reveal the mature three-factor structure for 8-year-olds but a single, undifferentiated structure for 4-year-olds.

在例子 9 中，第一句话说明研究的目的，第二句介绍了研究的方法，最后一句描述了预期结果。

写这段一个常见的错误就是误用了将来时态。实际上，你描述的事情已经发生过了，所以使用过去式才是适合的。另一个常见的问题是把研究方法的内容写得太过详细。在介绍研究设计和程序时，你应该尽量以最少的内容，让读者理解你做了什么以及什么样的结果能够提供有力的证据来验证你的假设。比如说，例子 9 中不必介绍具体的执行功能的实验任务，因为这些内容对于理解研究逻辑并不是必要的。

在这一讲的最后，我要再次强调，引言是文章中最重要的两个部分之一，另一个是结果部分。如果你的引言写得相当精彩，那么读者在读完这部分之后会很想直接跳到你的结果部分，来看看你的研究有没有达到预期结果。在 *Psychological Science* 做编辑期间，我每天阅读大约 10 份稿件，其中会有一到两份稿件的引言呈现了新

颖的观点和高端的研究方法，深深地吸引了我。你的目标就是写出让人心潮澎湃的引言！

练习 5.4

用所提供的信息写一个引言结尾部分的段落。

1. Are positive and negative events remembered equally well?

Hypothesis: Because negative outcomes lead to more processing of details, we expect negative events to be recalled more accurately.

Method: In the spring of the school year, we asked students at four high schools to recall the scores of their school's football games from the previous fall. Each student received a list of all games with the opponent's name provided; students listed the number of points scored by each team. To control for exposure to game-related information, students were asked to estimate, on 7-point scales, their interest in their high school football team and their attendance at the previous fall's games.

2. Do people's responses to stressful daily events predict whether they develop depression?

Hypothesis: People who respond routinely to stressful daily events by becoming upset, hostile, or nervous are at greater risk for developing depressive symptoms.

Method: College students were tested twice during the academic year. In the second month of the fall semester, they came to the laboratory and completed a measure of depressive symptoms. In the week that followed this visit, every evening they completed online measures of (a) the different stressors they had experienced that day (e.g., "had an argument with a friend") and (b) the extent to which they had experienced positive and negative emotions during the day. During the last month of the academic year, they returned to the lab and completed the measure of depressive symptoms again.

小结

1. 使用一个好的例子、修饰性疑问句和令人惊讶的事实来吸引你的读者。
2. 当你论述研究的论点时，一定要把研究的问题、想法和结果作为重点，

并且要准确地、有选择性地呈现论据。

3. 在引言的最后一到两段，介绍研究中的假设及如何进行检验。

课后练习

1. 阅读几篇文章的前一到两段。它们有没有足够打动你？如果是的话，它们怎么做到的？如果不是，请进行修改，让它们足够吸引读者。
2. 寻找说明研究基本观点的段落，并且把它们的论据重新写出来。
3. 阅读几篇文章引言最后一段，判断它们的假设和检验方法的表述是否清晰。

练习答案

练习 5.1

1. Following the championship match of the World Cup, fans of the winning team leave with many positive memories while fans of the losing team have many negative memories. Research indicates that both groups of fans will recall the match more accurately than a neutral observer, but evidence is inconsistent concerning whether fans of the winning or losing team will recall the match more accurately.
2. You've just finished your PhD and are choosing between two positions, each involving an excellent group of 10 scientists. One group includes experts from a few closely related disciplines, and the other includes scientists from a broad range of disciplines. You want to join the most productive group; which should you choose? In fact, studies of the impact of a group's heterogeneity on performance suggest benefits (e.g., different perspectives yield greater creativity) as well as drawbacks (e.g., greater effort involved in coordinating diverse workers).
3. Unhealthy employees are expensive for U.S. companies. For example, a typical smoker costs his or her company more than $3,000 annually in increased health care costs, greater absenteeism, and reduced productivity. Consequently, there has been much interest in determining whether workplace wellness programs are

most effective when they reward employees for healthy behavior or penalize them for unhealthy behavior.

练习 5.3

1. Skill at learning a second language (L2) depends on several factors, including phonetic ability (Wilson, 2009), grammatical sensitivity (Joyner, 2007), and phonological memory (DeWolff, 1987).
2. The effects of cognitive load on performance are inconsistent. On the one hand, simultaneously performing a second task (e.g., generating letters, remembering digits) often impairs performance: people err more often on arithmetic tasks and respond more slowly when judging whether a stimulus is a letter when they are simultaneously generating letters randomly (Kim, King, Novak, & Campbell, 2000; López, 1988). On the other hand, performing a second task occasionally improves performance: Golfers putt more accurately, and people learn perceptual categories more rapidly (Hester, Fischer, & Lee, 1990; Moore & Turner, 2011).

练习 5.4

1. To determine the impact of an event's emotional valence on memory for that event, we asked students to recall the scores of football games in which their school's team had played 6 months previously. Because negative outcomes lead to more processing of details, we anticipated students would remember scores of losses more accurately than scores of wins.
2. The aim of our study was to examine the link between a person's response to stressful situations and risk for developing depressive symptoms. At the beginning of the academic year, college students completed a measure of depressive symptoms. Then, for a week they reported their daily experiences of stressful life events, positive emotions, and negative emotions. Finally, at the end of the year, they again completed a measure of depressive symptoms. We expected that people who initially reported greater stress and greater negative affect would report greater depressive symptoms at the end of the school year (controlling for symptoms at the beginning of the year).

第6讲

如何报告结果

数据收集和分析完成以后，我们需要把研究结果完整地呈现出来。可能在开始做这个研究之前，你已经写好了引言的初稿，那么我建议你在写结果这部分之前先读一遍引言。这样做的原因是结果部分几乎决定了文章的好坏。换句话说，如果结果不是强而有力的话，你的引言和讨论写得再好也无济于事。

在写结果时，你依然需要像之前强调的那样，最好运用讲故事的方式来撰写这部分的内容。而且要能够用你的研究问题的相关统计检验结果来告诉读者发生了什么。在写作过程中，要突出结果，而不要强调你使用了什么分析方法。也就是说，统计检验并不是故事本身，它们只是能够让这个故事更可信罢了。

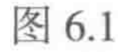
6.1 开始结果部分的写作

这一部分的写作最忌讳的是，采用逐条罗列的方式把你所有的

分析结果全部报告出来，这样做只是在分析数据结果，而不是报告主要的研究发现。一种好的报告结果的方法是把这个部分当作漫画小说来写，里面包括一些有趣的图片和必要的文字解释。也就是说，在报告结果时，你应该运用一些图片或者表格，并结合文字来描述研究中的重要发现，这样不仅可以引导读者认真阅读你的研究发现，还为他们提供了必要的统计数据。

如果采用这种方法，那么你第一步就是挑选一些有趣的图表。当然这些图表并不是日常生活中我们所说的照片，而是那些你想要和别人分享的，描述了你主要结果的图或表。

很多作者认为图表的选择仅仅是个人的偏好，但事实却不是这样。在呈现重要结果的时候，图通常比表格更好。大部分的读者可以通过图更快地找出重要信息。例如，下列图 6.1 和表 6.1 呈现了同样的数字，但是读者却可以很快从图 6.1 中了解到，在实验条件 A 中比在 B 中因变量随着自变量增长速度更快，而这一点在表格中就很难很快地分析出来。


图 6.1

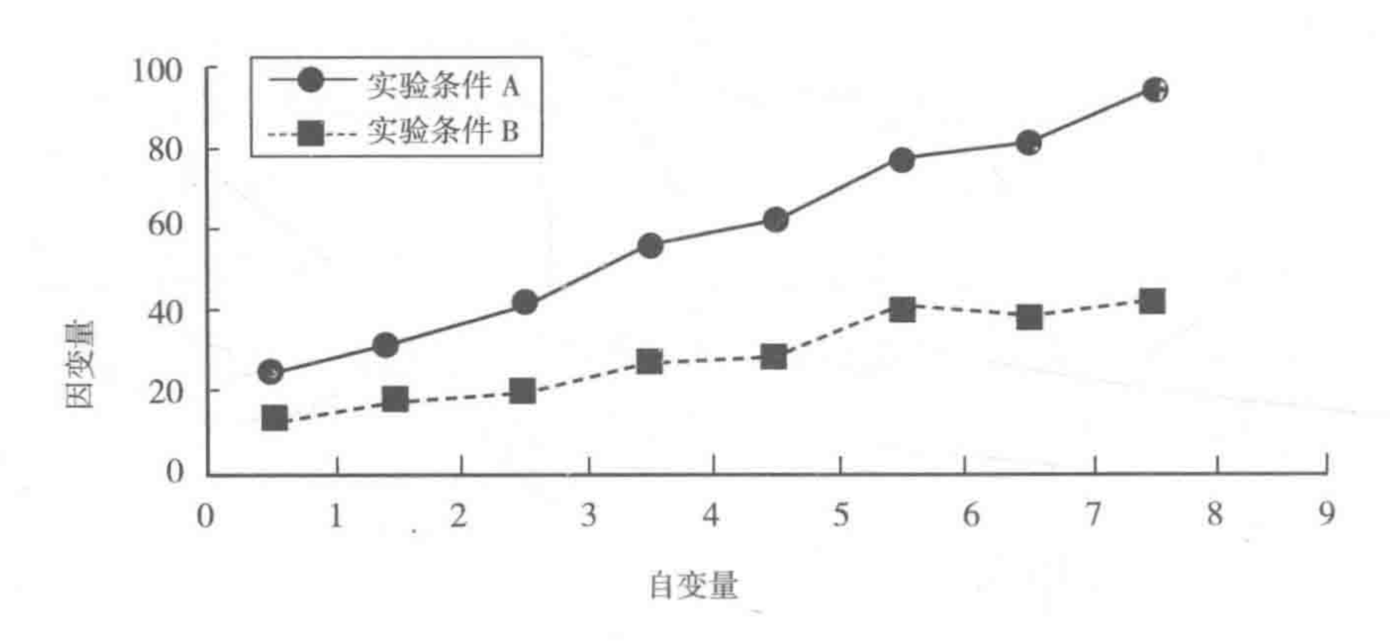


表 6.1　自变量对因变量分别在实验条件 A 和 B 中的作用

实验条件	因变量							
	1	2	3	4	5	6	7	8
A	25	33	41	56	62	78	81	95
B	13	18	20	27	29	41	39	42

然而并不是所有的结果都适合用图来呈现，以下三种情况应考虑使用表格：第一，当需要呈现许多相关系数时，应使用表格。例如相关矩阵表 6.2，它就可以很好地呈现许多相关系数。

表 6.2　描述性统计和相关分析

变量	M	SD	1	2	3
1. 自我控制	0.79	0.14	—		
2. 语言智力	104.10	12.60	.23*	—	
3. 社会经济水平	32.15	11.50	.05	.28*	—
4. 反社会行为	0.90	0.18	－.37**	－.24*	－.07

*p < .05, **p < .01

第二，当读者们需要知道确切的数值而不是变化趋势的时候，应使用表格。其中最常见的一种情况就是，作者需要使用表格来呈现多元回归的结果，读者往往对这个表格中各个变量的 beta 值比较感兴趣。表 6.3 就是一个很好的例子。

表 6.3　预测高中数学成绩 的多元回归分析

预测变量	β	*SE*
五年级的语言智力	.10	.01**
五年级的非语言智力	.18	.02**
家庭收入	.05	.03*
父母的教育水平	.15	.02**
R^2 的总数	.23	

*p < .05, **p < .01（N = 153）

第三，当需要呈现一个实验中多个变量的结果，或多个实验中相同变量的结果时，需要使用表格。表 6.4 很好地呈现了多个变量的结果。相比之下，我们使用图呈现这一数据结果会比较复杂，要不就是包含多个嵌套，要不就是包含多个 Y 轴。当然，如果你对一个实验中的多个自变量的变化趋势感兴趣，你就只能咬紧牙关画出一个复杂的图了。

表 6.4　实验一的结果

变量	实验条件	
	控制组	实验组
收入补助重新分配	3.7（1.1）	2.4（1.2）*
个人代理结果	3.5（0.9）	4.8（1.4）*
财富不均的担忧	5.2（1.7）	3.3（1.5）*

备注：每个问卷采用的是 1 — 7 等级计分，其中 7 代表非常同意，括号中的是标准差。* 表示平均数差异显著，$ts\ (38) \geqslant 8.21$，$\eta^2 \geqslant .09$，$p < .01$

当你决定好更适合你的结果的呈现方式时，就可以画出一个相应的表或图了。这只是一个大致的草稿，以后还可以修改。

练习 6.1

看看以下的结果适合用图还是用表来呈现，请画出相应的图或表。

1. In an experiment designed to evaluate the impact of an intervention on adolescents' consumption of soda, half the participants were assigned to the intervention condition and half to a control condition. Consumption of sodas was measured before the intervention began and when it ended, as well as 3 and 6 months after it ended. For adolescents in the intervention condition, consumption (defined as the number of 20-ounce drinks/week) was 8.6, 3.2, 4.5, and 7.5 at the four measurements; for adolescents in the control condition, corresponding values were 8.9, 6.9, 7.6 and 8.0.
2. In an experiment on the impact of rejection on mood, participants tossed a ball with two other people who were actually confederates

of the experimenter. Participants received the ball often in the included condition, but not in the rejection condition. All sessions were video recorded and scored later for facial expressions of negative emotions such as anger or sadness. After 5 minutes of ball tossing, participants in both conditions rated their sadness on a 7-point scale in which larger numbers indicated greater sadness. Finally, participants were asked whether they would be willing to take part in another experiment with the confederates. The video records showed that 18 percent of participants who were included displayed negative emotion compared with 85 percent of participants who were rejected. Average ratings of sadness were 2.5 and 5.6 for included and rejected participants, respectively. When asked to participate in another experiment with the confederates, 78 percent of included participants agreed, but only 15 percent of rejected participants agreed.

6.2　描述研究发现

选择好了图表，就需要构思研究结果的文字描述了，以引导读者阅读这些结果。就像之前说过的，引导读者最好的方法就是讲故事，报告必要的分析结果来说明你之前提出的研究问题。记住，你需要分别描述每一个图和表格。现在不用考虑如何将所有结果整合在一起形成一个整体连贯的部分，那是以后需要做的。

在接下来的部分，我会告诉大家如何使用叙述故事的方法来阐述两种常见的研究发现。

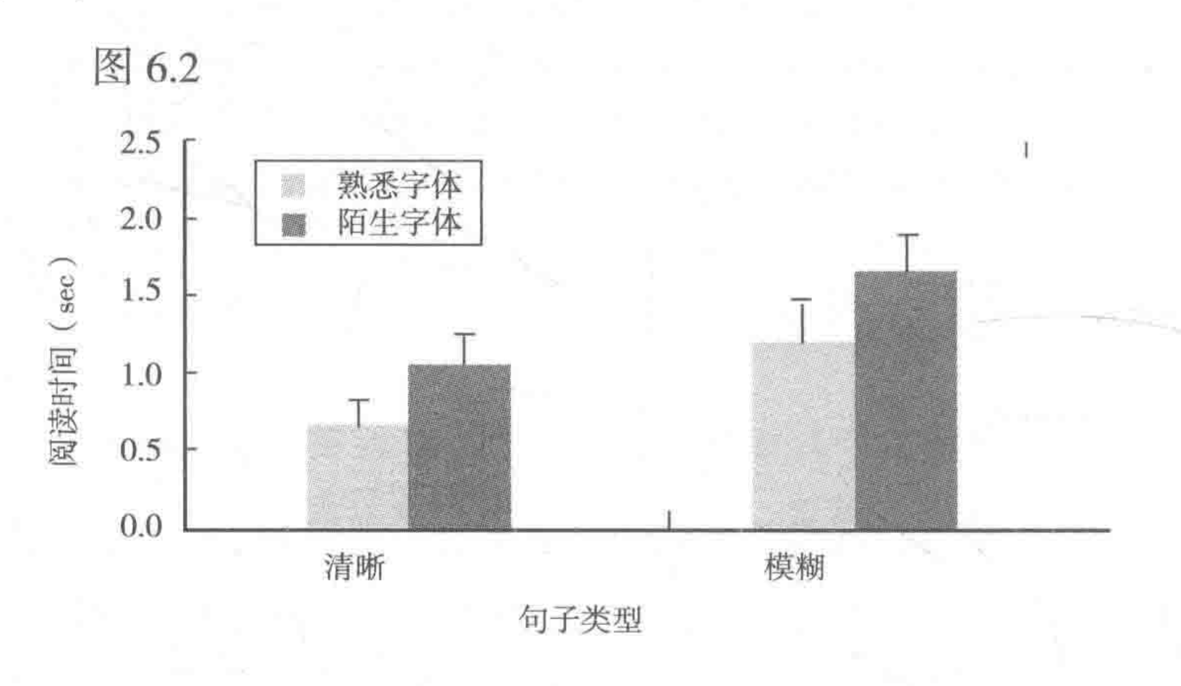
6.2.1　实验研究发现的描述

在实验研究里，假设通常是实验处理之间关系的描述。比如预期一种实验处理的效应要高于另外一种实验处理；或者随着实验处理的增加，因变量也随之变化。（诸如此类的假设通常通过分析变化来验证。）比如说，想象一下，有这么一个实验，实验任务是被试阅读一些呈现在电脑屏幕上的句子。其中有一半的句子意思非常

清楚，而另一半句子的意思比较含糊。另外，一些句子是用被试熟悉的字体呈现，而另一些是被试陌生的字体。我们假设被试在阅读意义含糊的句子和用陌生字体呈现的句子时速度都比较慢；此外，我们还假设句子意思的清晰度与呈现字体这两个因素之间存在交互作用，例如意义含糊且用陌生字体呈现的句子的阅读速度最慢。

考察实验结果是否支持这些假设的通常做法是做一个两因素方差分析（ANOVA），其中字体是被试间变量，句子类型是被试内变量（见图 6.2）。段落 1a 是描述这种方差分析结果的一种常见的方式：

图 6.2



(1a) We conducted a two-way analysis of variance on the reading times shown in Figure 6.2 with type of font (familiar, unfamiliar) as a between-subjects variable and type of sentence (unambiguous, ambiguous) as a within-subjects variable. The main effect of type of font was significant, $F\ (1, 22) = 56.33$, $\eta^2 = .18$, $p < .01$, as was the main effect of type of sentence, $F\ (1, 22) = 315.50$, $\eta^2 = .67$, $p < .01$. The interaction between type of sentence and type of font was significant, $F\ (1, 22) = 9.50$, $\eta^2 = .02$, $p < .01$. Simple-effects analyses showed that the effect of type of sentence was significant for both familiar fonts, $F\ (1, 22) = 108.0$, $p < .01$, and unfamiliar fonts, $F\ (1, 22) = 216.75$, $p < .01$.

段落 1a 是一个很好的统计描述的例子，它着重描述了方差分

析的结果，但却没有告诉读者有关实验怎么做。我们来与段落 1b 作比较：

(1b) Reading times are shown in Figure 6.2. As hypothesized, reading times were greater for unfamiliar fonts, F (1, 22) = 56.33, η^2= .18, and for ambiguous sentences, F (1, 22) = 315.50, η^2 = .67. Furthermore, the predicted interaction was significant, F (1, 22) = 9.50, η^2 = .02: Ambiguous sentences took more time to read with familiar and unfamiliar fonts, Fs (1, 22) ⩾ 108.0, but the effect was greater for unfamiliar fonts.

段落 1b 告诉了读者实验是怎么做的。但是在描述结果的时候并没有用专门的句子来陈述统计分析，而是把它们放在次要的位置，因此这样的描述方式没有打乱故事的主线。例如，在报告字体类型对阅读时间的影响时，即段落 1a 中，作者是以字体类型的主效应来报告这一结果；而在段落 1b 中，作者是告诉读者被试会用更长的时间去阅读以不熟悉的字体呈现的句子。相似地，在两个段落里面都包括了交互作用，在段落 1a 中，作者是把交互效应作为因素分析结果的一部分来报告的，但是在段落 1b 中，作者却使用了截然不同的方式来报告。简而言之，我们不需要列出那些显著的效应，而是描述发生了什么，并介绍研究结果。

其实还有一些其他的因素使得段落 1b 更容易被理解。首先，结果与假设连接紧密。第二，没有描述使用了什么样的方差分析。如果你在方法部分对研究设计描述得足够清晰，那些对你使用了什么样的方差分析感兴趣的读者，可以通过你的研究设计推测出数据分析方法。第三，没有呈现 p 值。就像我在前面说过的那样，p 值在其他地方报告了。第四，并没有分别报告各个简单主效应的 F 值，而是报告一些简单主效应的汇总结果，如 Fs ⩾ 108。

另外一个报告结果的技巧就是以被试在实验过程中的表现为句子的主要部分，而不是描述实验条件。你应该避免例句 2a 中以方差分析为描述的导向：

（2a）There was a significant main effect for type of video game, F (1, 65) = 6.24, η^2 = .08.

由于例句 2b 中强调的是研究发现，而不是统计检验，因此这个句子更好一些。

（2b）Cheating was greater in the violent video game condition than in the nonviolent video game condition , F (1, 65) = 6.24, η^2 = .08

如果我们以被试在实验中的表现作为句子的主体部分例如 2c，这个句子会更好一些：

（2c）Participants cheated more when they played a violent video game than when they played a nonviolent video game, F (1, 65) = 6.24, η^2 = .08.

与句子 2b 不同的是，例句 2c 很容易读懂，原因就在于读者在读句子 2c 时不必去回忆不同的实验条件是怎么样的，句子 2c 可以提醒读者。此外，像在第一讲中提到的，例句 2c 是由故事中的主人翁与他们的行动组成的（主人翁：被试；行动：欺骗）。

例句 3a 和 3b 同样呈现了以实验条件为导向和以被试表现为导向的描述方式之间的区别：

（3a）Errors were greater in the high-load condition than in the low- and no-load conditions, F (2,48) = 4.17, η^2 = .05.

（3b）Participants erred more often when they performed the task under high load than under low or no load, F (2,48) = 4.17, η^2 = .05.

练习 6.2

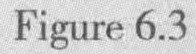
修改以下段落，使它们看上是在描述实验结果，而不是方差分析。

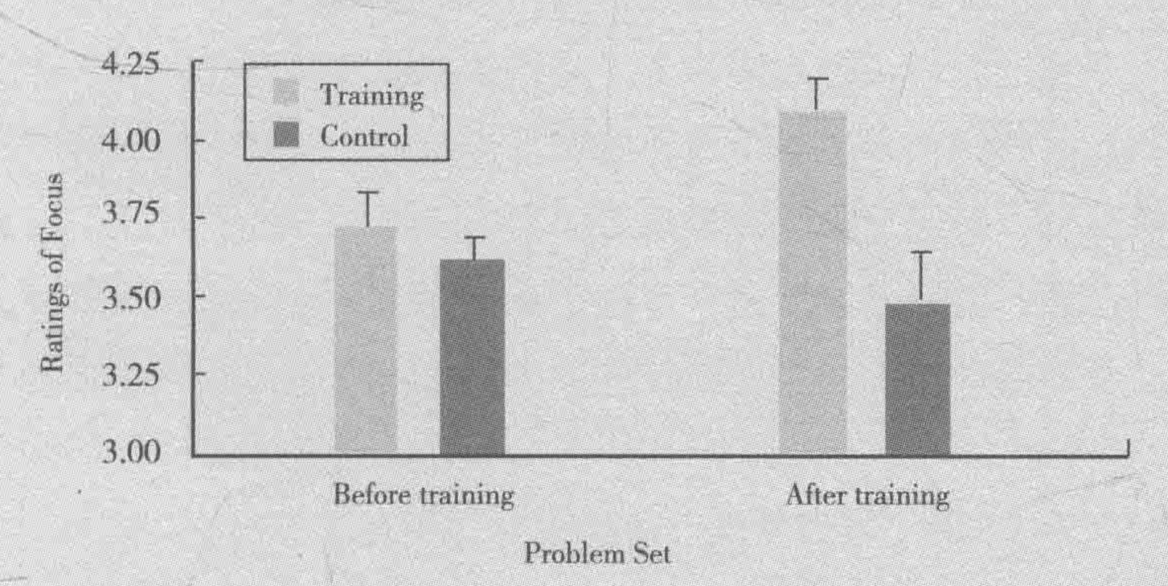
Experiment 1

Background: College students attempted to solve reasoning problems presented on a computer screen. Periodically a probe appeared on the screen asking them how focused they were on the task (1= not at all; 5= completely focused). They solved two sets of problems, separated

by an hour. During this time, students in the training condition were given tips for focusing their attention; students in the control condition were given tips for not gaining weight. The hypothesis is that students in the training condition will improve their task focus on the second set of problems.

Description of results: Students' ratings of task focus are shown in Figure 6.3. They were analyzed with a 2 (condition: training, control) $\times$2 (session: before training, after training) analysis of variance with repeated measures on the latter factor. Neither the main effect for condition, F (1, 44) = 1.15, $\eta^2 < .01$, $p > .05$, nor the main effect for session, F (1, 44) = 0.68, $\eta^2 < .01$, $p > .05$, was significant. However, the interaction between these variables was significant, F (1, 44) = 4.19, $\eta^2 = .07$, $p < .05$. Simple effects tests revealed that ratings of task focus increased across sessions in the training condition, F (1, 44) = 7.27, $p < .05$, but not in the control condition, F (1, 44) = 0.79, $p > .05$.


Figure 6.3



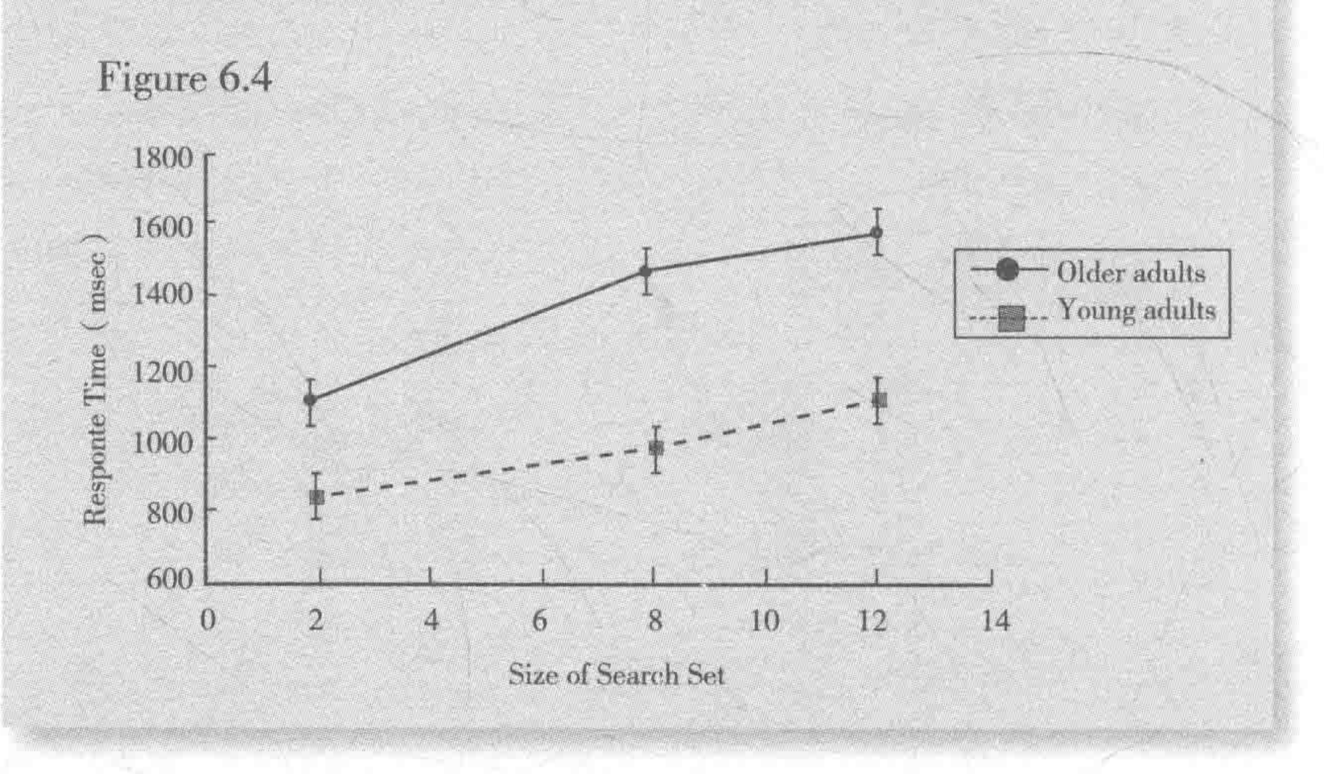
Experiment 2

Background: On each trial, a familiar object appeared on a computer screen for 3 seconds, followed by 2, 8, or 12 objects, with one of them being the object just seen. Participants used a mouse to click on the object seen previously. Time to locate the object was recorded and averaged for sets of 2, 8, and 12 objects. The participants included

younger and older adults; the hypotheses were that (a) locating the object would take less time in smaller sets, (b) older adults would need more time to locate the object, and (c) older adults would need proportionately more time to locate objects in larger sets.

Description of results: Figure 6.4 depicts response times as a function of the size of the set, separately for younger and older adults. Response times were analyzed with a two-way analysis of variance in which age (younger adult, older adult) was a between-subject factor and set size (2, 8, 12 objects) was a within-subject factor. The main effect of age was significant, F (1, 48) = 26.20, $\eta^2 < .58$, $p < .01$, as was the main effect of set size, F (2, 96) = 68.71, $\eta^2 = .36$, $p < .05$. However, the interaction between age and set size was also significant, F (2, 96) = 9.25, $\eta^2 = .15$, $p < .01$. Simple effects tests revealed that the effect of set size was significant for younger adults, F (2, 96) = 37.24, $p < .01$, and for older adults, F (2, 96) = 33.17, $p < .01$.

Figure 6.4



6.2.2 相关研究发现的描述

在相关研究中，研究假设通常是变量之间的关系。这样的假设一般是通过看变量之间的相关系数是否显著来检验它们。例如，想象一下有这样一个研究，我们对自我控制和反社会行为之间的关系

很感兴趣。我们假定个体的自我控制越高，其反社会行为就越少。换句话说，自我控制与反社会行为之间存在负相关。由于个体的智力和社会经济状况与其反社会行为之间可能存在共变关系，因此在研究中，我们除了测量被试的自我控制与反社会行为之外，还测量了他们的智力和社会经济状况。研究结果见表 6.2。

对这一研究统计结果的描述见段落 4a：

（4a）Correlations between the four variables are shown in Table 6.2. Self-control was correlated significantly with verbal intelligence (r = .23, p < .05) and antisocial behavior (r = –.37, p < .01). Verbal intelligence was correlated significantly with socioeconomic status (r = .28, p < .05) and antisocial behavior (r = –.24, p < .05). Socioeconomic status was not correlated with either self-control (r = .05) or antisocial behavior (r = –.07).

这个段落存在以下几个问题。第一，它重复了表格里的很多信息，这会让大家疑惑为什么作者会把表格放在这个地方。第二，描述是以统计数据为导向的，只注重了变量之间的相关是否显著，而没有告诉读者变量之间的关系是怎么样的。换一种说法就是，作者只描述了每个相关系数的大小，而忽视了相关系数的符号问题，即正相关还是负相关。第三，这个段落忽略了研究假设，以及考察这些变量的原因。本研究主要是考察自我控制和反社会行为之间的相关性，而计算其他变量之间的相关只是为了说明这两个变量之间的相关不受第三个变量的影响。

段落 4b 描述了同样的相关关系，但它采用了讲故事的方式：

（4b）Correlations between the four variables are shown in Table 6.2. As predicted, greater self-control was associated with less antisocial behavior. This relation may reflect the impact of intelligence because greater intelligence was associated with greater self-control and less antisocial behavior. However, socioeconomic status is not implicated in the link between self-control and antisocial behavior because it was unrelated to either of these variables.

段落 4b 以重要变量之间的相关为开头，强调了它们之间的关系，而不是相关是否显著。该段落的后半部分考察了智力和社会经济状态在自我控制与反社会行为两个变量之间的关系中所起的作用。

段落 4b 的描述是以变量为导向的；段落 4c 描述同样的相关关系，但不同的是，它是以个体行为和特征作为句子的主体部分。

(4c) Correlations between the four variables are shown in Table 6.2. As predicted, individuals with greater self-control were less likely to behave antisocially. This relation may reflect the impact of intelligence because more intelligent people had greater self-control and were less likely to behave antisocially. However, socioeconomic status is not implicated in the link between self-control and antisocial behavior because people's socioeconomic status was unrelated to their self-control or their tendency to behave antisocially.

以人为导向的描述是基于具体的行为和特征的，它比以变量为导向的描述更加清晰。但有时候用行为来描述相关关系的话，会比较啰唆，段落 4c 中"表现出反社会"就是这样一个问题。在这种情况下，以变量为导向的描述或许更经济高效。但一般来说，不要交叉使用这两种描述方式。

练习 6.3

修改以下段落，使它们以故事为导向，而不是以数据为导向。

Study 1

Background: Firs-grade students in the United States and Spain were administered three tasks:(1) a measure of nonverbal intelligence, (2) a measure of their knowledge of letters and the sounds associated with them, and (3) a measure of their ability to read individual words correctly aloud. The hypothesis is that knowledge of letters will predict students' reading skill, for students in the United States and Spain, but that nonverbal intelligence will not predict reading skill.

Description of results: Correlations between measures are shown in Table 6.5[1]. Language was unrelated to nonverbal intelligence, letter knowledge, or reading skill (*rs* = .03, –.21, and .18, respectively). Nonverbal intelligence was unrelated to letter knowledge and reading skill (*rs* = .19 and .15, respectively). However, letter knowledge was related to reading skill ($r = .72, p < .01$).

Table 6.5　Bivariate Correlations

Measure	*1*	*2*	*3*
1. Language	–		
2. Nonverbal intelligence	.03	–	
3. Letter knowledge	–.21	.19	–
4. Reading skill	.18	.15	.72**

Note: Spanish is dummy coded as 1; English as 0.
**p < .01

Study 2

Background: Older adults were asked about their level of education, age, and marital status. In addition, they were asked to rate whether they were satisfied with the amount of support they received from other people. Finally, they were asked to report the frequency with which they had experienced symptoms of anxiety or depression within the past month. The hypothesis was that people who were more satisfied with their social support would be less likely to experience symptoms associated with anxiety and depression.

Description of results: Correlations between measures are shown in Table 6.6. Education and age were unrelated to the other measures (*rs* = –.12 to .05 for education and –.12 to .08 for age). Marital status was related only to mental health symptoms ($r = -.15, p < .05$). Perceived support was related only to mental health symptoms ($r = -.36, p < .01$).

[1] 为了简单，我把练习 6.3 中的两个相关矩阵表格中的变量的平均数和标准差都去掉了，在实际的论文写作中，相关矩阵表格中应该包含变量的平均数和标准差，如表 6.2 所示。

Table 6.6 Bivariate Correlations

Measure	*1*	*2*	*3*	*4*
1. Education	–			
2. Age	–.12	–		
3. Marital status	.05	–.12	–	
4. Perceived support	–.08	.05	–.01	–
5. Mental health symptoms	–.06	.08	–.15*	–.36**

Note: Married or cohabitating is dummy coded as 1; otherwise 0.
$^{*}p < .05$, $^{**}p < .01$

表 6.2 和表 6.6 中呈现的多元回归、结构方程模型和层级线性模型等数据统计结果通常是对假设进行精确检验的基础。在报告这类数据分析的结果时，你需要报告一些细节，因为这些方法比较复杂，读者对很多内容不太熟悉。尽管如此，也要尽量坚持讲故事的方式。例如，表 6.7 呈现多元回归分析来考察表 6.6 中的相关关系。段落 5a 在描述这些结果时，强调了数据分析方法：

(5a) The results for a hierarchical multiple regression predicting mental health symptoms are shown in table 6.7. In the first step, we entered the control variables. Collectively, they accounted for 5 percent of the variance, but only marital status was a significant predictor (β = –.10, p < .05). In the second step, we entered perceived social support. This produced a significant increase in variance explained (ΔR^2= .16), and perceived social support was a significant predictor (β = –.40, p < .01).

表 6.7 预测心理健康的多元回归分析

预测变量	第一步	第二步
教育	–.04	–.02
年龄	.03	.05

续表

预测变量	第一步	第二步
婚姻状况	– .10*	– .08
心理健康		– .04**
R^2	.05*	.21**
△ R^2	.05	.16

注：所有的协变量都是标准分
$^*p < .05$, $^{**}p < .01$

段落 5a 描述的重点是多元回归的分析步骤和表中的数据结果。相反，段落 5b 强调了研究发现，而对分析方法本身描述得很少。

（5b）The results for a hierarchical multiple regression predicting mental health symptoms are shown in Table 6.7. As predicted, perceived social support predicted mental health symptoms even after controlling for education, age, and marital status.

尽管段落 5b 的第一句话是描述了具体的分析方法，但是第二句话着重于研究结果以及它们支持了研究假设。由于层级回归方法使用已经相对普遍了，因此，段落 5b 这种描述方法是比较合适的。但是如果你需要报告很多复杂的结果，且数据的分析方法相对不常见的话，你就需要采取段落 5a 的描述方式。

6.3　整合一些零碎的研究结果

描述完了主要发现之后，你还需要描述一些其他附带的结果。例如，当自变量是被试的反应时，你可能需要报告被试反应准确性的结果。又或者在一个实验中，是通过实验操纵来诱发被试的某种心理状态，如悲伤情绪、力量感和饥饿等，那么你可能要报告实验操纵有效性的结果。在描述这些附带的结果时，请结合故事描述的方式，简洁报告这些结果即可。例如，例句 6 就是描述实验操纵有效诱发被试愤怒情绪的结果：

（6）Analyses of participant' mood before they interacted with the confederate showed that participants reported greater anger when they had been insulted by the experimenter (M = 5.6, s = 1.2) than when they had not (M = 2.2, s = 0.9), F (1, 32) = 16.21, η^2= .18.

在你报告完主要结果与附带结果之后，就可以把所有的结果整合在一起了。我建议你最好从附带发现开始报告，然后是主要的发现。以不重要的发现热身，以主要的发现结尾，这样就可以使读者保持精力读完你的结果部分。我的建议是，你在结果部分的开头先用一个简短的段落去描述每个部分你要写些什么，然后你可以插入副标题以区分各个部分的分析结果。

此外，这一段落可以让你避免重复描述一些信息。例如，不必多次重复描述“p < .05”，你可以用这样一个短语“效应显著，p < .05”。相似地，有些研究者感兴趣的效应从来没显著过，那作者不必重复说不显著，只要这样一句话说明就行，“在我们报告的分析中，X 一直不显著”。段落 7 就是这种引导性段落的一个例子：

（7）Results

The results are reported in two sections—one devoted to analyses of the structure of the emotion tasks and another devoted to links between performance on those tasks and participants' sense of agency. Preliminary analyses revealed comparable performance for males and females; consequently, this variable is not discussed further. Unless noted to the contrary, for all effects described as significant, p < .01.

最后需要注意的是：就像我提到过的，一些作者会因为用简略直观的方式报告他们的结果而感到紧张。他们害怕审稿人可能会发现这种报告中的错误。幸运的是，有一个满足审稿人和读者需要的简单方法：不要以方差分析为导向，而要以故事主线为导向来报告结果，并附上数据分析的补充文件（例如，方差分析结果表格）。这一方法不仅可以免去一些读者因大量细节没被呈现出来引起的苦

恼，也可以带给他们很强的故事情节感。许多杂志都很推崇这种方法，因为这样可以让审稿人收到这些数据的细节信息，如果文章被接收的话，还可以把这些信息上传到网上，方便想要了解这些信息的人直接查询，而且也不会破坏那些不想了解细节的人阅读文章时的流畅感。

小结

1. 找出你研究中的主要发现，并找出适合呈现这些主要发现的方式，用图或表来表达。
2. 简要地描述主要的结果，尽量少写一点数据细节。
3. 用一个引导性的段落来介绍你的结果部分，然后介绍附带的结果，最后是主要的结果。

课后练习

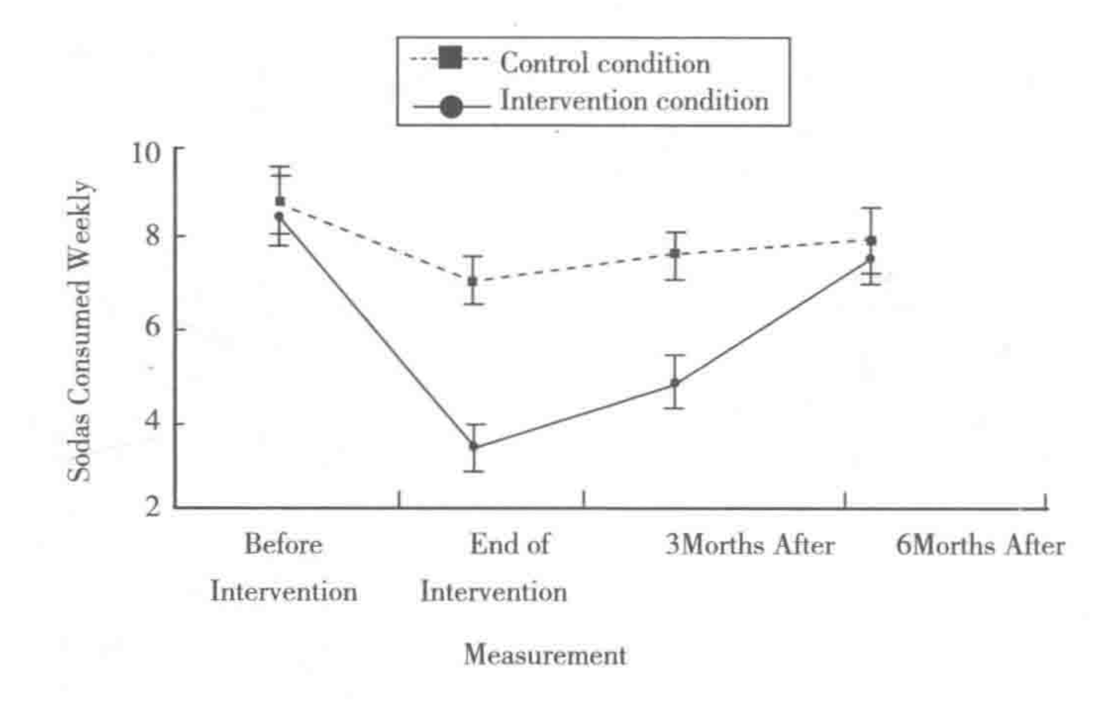
1. 从文献里找一些图片和表格，确定它们更适合用图还是表来呈现。
2. 在文献中，找出结果部分以数据为导向的描述，然后以讲故事的方式重写这部分的内容。
3. 找一些以主要结果为开始，并以附带的结果为结尾的结果部分的论文，看看它们是不是会给人一种以牢骚声结尾，而不是一声巨响为结尾的感觉。

习题答案

练习 6.1

1. For this sort of study, it's important to see whether adolescents in the two conditions consume similar amounts of soda before the intervention and to see how they differ after the intervention. In other words, it’s the pattern of consumption across measurements that matters. Consequently, a graph is the way to go.

Figure 6.5



In the figure, it's clear that adolescents in the two groups drank the same amount of soda before the intervention and that the intervention cut consumption in half. At 3 months after the intervention, consumption was still down from the original level, but 6 months later the benefits of the intervention had vanished. (Notice, also, that this figure includes bars depicting the 95 percent confidence interval around the mean.)

2. This study includes three dependent variables that can be presented easily in a table.

Table 6.8 Descriptive Statistics

Dependent variable	*Included participants*	*Rejected participants*
Percentage displaying negative emotion	18	85
Mean ratings of sadness (SD)[a]	2.5 (1.23)	5.6 (0.91)
Percentage willing to participate in another study	78	15

[a] *on a scale of 1–7 where 7= very sad*.

练习 6.2

1. Students' ratings of task focus are shown in Figure 6.3. Overall, students in the training and control conditions rated their focus similarly, F (1, 44) = 1.15, $\eta^2 < .01$, and their ratings did not change across problem sets, F (1, 44) = 0.68, $\eta^2 < .01$. However, the predicted interaction was significant: F (1, 44) = 4.19, $\eta^2 = .07$. Students in the training condition reported greater focus, F (1, 44) = 7.27, in the second session (after training), but students in the control condition did not, F (l, 44) < 1.[1]
2. Figure 6.4 depicts response times as a function of the size of the set, separately for younger and older adults. As expected, older adults took more time to respond than younger adults, F (1, 48) =26.20, $\eta^2 < .58$, and both groups took more time to respond on larger sets, F (2, 96) = 68.71, $\eta^2 = .36$. Of particular importance was the predicted interaction between age and size of the search set, F (2, 96) = 9.25, $\eta^2 = .15$. Although both groups took longer to respond on larger sets, Fs (2, 96) ⩾ 33.17, the increase was greater for older adults.

练习 6.3

1. Correlations between measures are shown in Table 6.5. As hypothesized, letter knowledge predicted reading skill, but nonverbal intelligence did not. Also as predicted, the language of instruction was unrelated to outcomes. OR

Correlations between measures are shown in Table 6.5. As hypothesized, children with greater letter knowledge read more skillfully, but children with greater nonverbal intelligence did not. Also as predicted, the language children learned was unrelated to their performance on the other three tasks.

2. Correlations between measures are shown in Table 6.6. As predicted, greater perceived support was associated with fewer mental health symptoms. Being married or cohabitating was also associated with

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[1] 只要 F 比值小于 1，不管其 df 和 p 值是多少，都不显著。因此准确地报告这些 F 值并没有增加多少有意义的信息。

fewer mental health symptoms. However, this did not mediate the link between greater support and mental health because being married or cohabitating was not associated with greater support. OR

Correlations between measures are shown in Table 6.6. As predicted, individuals who perceived greater support reported fewer mental health symptoms. Individuals who were married or cohabitating also reported fewer mental health symptoms. However, this did not mediate the link between greater support and mental health because individuals who were married or cohabitating were not more satisfied with social support.

第 7 讲

如何对研究结果进行讨论

写完了引言和结果部分之后，你现在可以重点关注讨论部分。这一部分的目的很简单，即根据研究结果来思考引言部分提出的问题。换句话说，你的研究是为了回答这些研究问题，那么在这一部分你需要向读者阐述你是如何回答，以及告诉他们研究结果有何含义。但是作者们经常对讨论部分感到头疼，部分原因是这一部分缺少一个明确的结构。在最后一讲，我们将先看看在写作过程中讨论部分经常出现的问题，然后提供一些解决方法。

7.1 一些经常犯的错误

我们先来看看在写讨论部分经常会犯的 6 个错误。

篇幅太长：一些作者认为有必要论述每一个结果，例如意料之外的四因素交互作用，这些交互作用往往是索然无味的，且不能被重复。又或者他们认为有必要讨论研究中所有可能的局限。千万不要这么做！讨论部分是用来论述一些少数有价值的主要问题，不要画蛇添足地论述与研究主题相隔太远的内容。

结构凌乱：我们经常看见作者以一种意识流的形式在写讨论部分，即观点缺乏逻辑顺序，彼此之间毫无关联。换言之，就好像作者在同一段落中论述了五种不同的观点，每个观点组成一个段落，然后随机地排列这五个段落。这些段落之间没有有机地结合起来，讨论部分也没有浑然一体的结构和计划。

缺乏深入讨论：一些作者在讨论部分对研究结果作了详细的回顾，但没有对它们展开实际讨论。简短地总结研究的重要发现，以此作为讨论部分的开端，不失为一种好的方法。但是你接着需要从读者的角度来讨论这些发现，解释它们证明了何种结论，还有哪些问题有待解决。

偏题太远：科学家们通常对一个整体领域有着众多的观点，他们有时候会利用讨论部分让这些灵感得以闪现，哪怕这些灵感与研究主题相隔很远。作者仿佛在说："既然要讨论我的研究，请允许我沉浸在这偏离主题的、漫无边际的思考中。"当然，如果你的研究发现对于这一领域有着广博的启示意义，那不妨自由地讨论它们。但是，即便你论述了六个与主题相关的段落，也不意味着你可以在接下来的段落中偏离主题。

语气不当：在第 2 讲中，我们谈论了保持一种平衡语气的重要性，巧妙地应用委婉词和强调词，如此才能使文章显得有信服力却非傲慢无理。没有哪一部分像讨论部分这么需要重视表达语气。在描述你的发现如何解决了研究问题时，你不想让文章看起来过于执着于自己的观点。但是你也不应该过于小心翼翼地避开对所有事情的正面阐述——因为如果连你都不相信自己的结论，那么其他人更不会相信！为了用一种谨慎但不失自信的语气表达，你可以使用第 2 讲中介绍的策略，即在写初稿的时候不要使用任何委婉词或者强调词，然后根据需要来增加这些词，并且委婉词的数量要多于强调词。

过度自夸：有很多作者在讨论部分会这样写："我们是首位展

示……”或者“这些发现很重要，因为……”作者这样做，就好像在怀疑读者不相信他们的研究结果具有足够的创新性和重要性，因此，他们试图通过这些语句使读者相信该研究的价值。事实上，这些内容应该呈现在引言部分：当你在引言部分简洁而强有力地阐述展开你的研究的合理性时，应该会让读者意识到，该研究相比以往研究文献的创新性和价值。你不需要浪费文字来提醒读者“我们是第一个！”或者是试图劝服读者“这的确很重要！”关于这一点，就像我读研究生时的导师说过：“判断一篇文章是否对以往研究具有重大贡献的不是作者本人，而是从事这一研究领域的同行”。我觉得他说得很好。

除了过度自夸之外，其他问题都是由于缺乏明确的讨论结构。写作前的有效规划可以避免讨论部分出现长度、组织以及不合适的主题等问题。接下来的一部分为你写讨论部分，提供了一个便捷的写作模板。

练习 7.1

讨论部分具有良好的结构，并不能完全避免讨论部分出现自夸这一问题，所以你需要能够发现这一问题并且修改它。请判断以下句子哪些地方看起来有自夸的嫌疑，并指出句子中哪些词汇具有自夸的意味。

1. These findings support the hypothesis that children prefer in-groups as soon as they can distinguish them from out-groups.
2. The results reported here are rich in their implications for the literature on metacognition.
3. This study is the first attempt to determine whether the absence of green space in a person’s environment is linked to symptoms of anxiety and depression.
4. Our findings complement those of laboratory studies in showing that diverse groups are sometimes less productive.
5. Other research has shown the effect of context on decision making; the groundbreaking contribution of the present experiment is in

demonstrating that this effect is a by-product of basic cognitive processes.

6. This finding is particularly valuable in suggesting that discrete emotions are rooted in feelings of arousal.

7.2 讨论部分的成功写作模板

我们为初学者的讨论部分设计了一个简明易学的模板，主要包括以下几个部分：引导段落、研究局限、研究的特有问题以及启示。

用一段简洁的引导段落作为讨论部分的开始，不失为一种好方法。引导段落应该包括一到三个用以回顾研究主要发现的句子；如果超过了三句话，说明你可能赘述了过多的细节。接着用一到三句话来简单介绍讨论部分的其他部分的内容。段落 1 就是一个引导段落的例子。

(1) Both studies reported here demonstrate that parents—particularly fathers—report greater happiness than nonparents. This was the case in Study 1 for a convenience sample in which participants provided multiple reports of happiness daily and in Study 2 for a nationally representative sample in which participants estimated their overall happiness. In the remainder of this Discussion, we discuss some limiting conditions on this evidence and then consider some differences between our findings and prior work on parents' happiness.

在引导段落之后还有以下一些部分的内容，我们将分别介绍。

7.2.1 研究的局限

用研究的局限来作为此段落的开始。这些研究不足会使得从研究发现中得出的结论有一定的局限性。你不需要依次列举研究中所有的局限，也不需要合理化你的研究中薄弱的数据或者严重缺陷。（如果你的研究中存在不能令人信服的数据或者严重的缺陷，不要试图在讨论部分进行补救，另做一个更好的研究吧）相反，你需要

说明为什么你的研究不是这一主题的最后一笔。段落 2 举例说明了这一情况（基于本书第 5 讲中第 9 段提到的研究）。

(2) Two features of this work limit the conclusions we can draw about developmental change in the structure of executive function. First, the study was cross-sectional, not longitudinal, and thus is subject to all the shortcomings associated with the former design. Second, although we measured the components of executive function with commonly used tasks, researchers disagree on the tasks that best tap into inhibition, shifting, and updating (e.g. Tremblay & Flores, 2012). Whether other plausible measures of executive function would yield comparable results is an open question.

7.2.2　研究所特有的问题

接下来讨论研究所特定相关的一到三个问题，一般会涉及展开该研究的合理性。这时可以解释你的研究发现是如何对你所关心的研究现象产生了更加深远的理解。当然，有时候会出现预料之外却有启发意义的结果，这可以在一个与研究所特有的副标题下进行讨论。段落 3 举例说明了 110 页中段落 1 涉及的问题。

(3) Our findings contrast with some reports in the literature in which parenting has been associated with relatively less happiness (e.g., Levine, 1972). Our view is that these differences are more apparent than real and hinge on the choice of the reference point. Some of these studies (e.g., Campbell & Harris, 2008) have examined changes in parents' happiness as their children develop and have found that parents are less happy when their children are infants. Others (e.g., Vejcek, Dikstra, &Karlsson,2013) have examined changes in parents' happiness as a function of the nature of their activities and have found that parents report being happier when involved in activities that do not include their children. However, such lifespan-and activity-related variations in parents' happiness are not inconsistent with parents' overall level of happiness being greater than that of nonparents.

7.2.3 启示

把本研究与这一研究领域中其他的研究者普遍关注的问题结合起来。此时你需要向读者呈现，你的研究是如何与其他更广泛意义上的问题联系的，这样你的文章就会不局限于少量专家感兴趣。例如，段落 1 的作者可能会把他们的研究与父母情绪或父母幸福感这些领域中的其他主题联系起来。段落 4 举例说明了讨论部分以启示为开头，这一研究来自第 5 讲段落 9 和这一讲段落 2。

(4) More generally, the present findings contribute to a more nuanced view of the processes that drive cognitive development during childhood. Specifically, cognitive development is often viewed as the by-product of general processes like executive function as well as domain-specific processes (McMillin & Fricker, 2009). Yet we know little about interactions between these two sources of cognitive growth. Given the present findings of qualitative and quantitative change in executive function during childhood, discovering these interactions will require…

这一段话站在更广的角度审视了研究发现，把执行功能的发展性变化与儿童认知发展中其他影响因素联系起来。

我们所提供模板的三个要素能引导你开始讨论部分，但你需要根据自己的文章来适度剪裁。如果你报告的是一篇简单又直接的研究，那么讨论部分有五个段落就足矣，即引导段、研究局限、两个问题以及研究启示，每个部分各一个段落，不需要标题。但是如果你要报告的是六个实验，你需要在讨论部分开始前加一个以“Summary of Findings”为题的段落。另外，如果你的研究对临床治疗、社会政策或者教育实践有启发意义，你可以在另一个单独的标题下进行描述和单独的讨论（例如：“Implications for Social Policy”）。

当你应用这一模板写讨论部分时，无论你在写作过程中有哪些变化，你需要避免前面所列举的前四个常见问题。这一模板提供了讨论部分的关注点和结构，因此这部分不会太长，但结构却很合理，讨论那些关系紧密的问题避免跑题。

最后，我想评论一下这一模板与你阅读过的其他研究报告有两点出入。第一，一些作者在讨论部分结尾的时候提及研究的局限，但是我认为这样不太合适。讨论部分作为一个整体，结尾应该有力这一原则同样适用于此。先解决研究局限这一问题，然后转入研究的启发性方面，以势如破竹的形式展开。第二，并不存在以“Directions for Future Research”为题的部分。当然，你需要指出接下来需要进行的研究，但是只有当该领域还有特定的、未解答的问题时，这些建议才更加强有力。举个例子，假设段落 3 的作者，他们对自己研究结果与前人研究发现之间的差异进行了解释，并设想未来可以做检验这一解释的研究，则把这个研究建议与他们的解释放在一起，会比放在一个单独的部分，更加有建设性。

练习 7.2

找一篇讨论部分没有副标题的，且已发表的文章。鉴别每一个自然段的作用，他们是否呈现了研究发现的总结和回顾、研究中的局限、研究的特定性及一般适用性，这些段落有其他作用吗？如果讨论部分没有引导段，就自己写一段。

练习 7.3

针对第 5 讲中练习 5.4 提到的每一项研究，请鉴别出该研究中存在的一个可以描述的局限，以及一个与研究特定相关的问题。

7.3 强有力的结尾

文章的结尾需要“掷地有声”而非“软弱无息”，避免像例句 5 和例句 6 仅仅号召更多的研究这样平庸的结尾。

(5) Future research on this phenomenon is essential.

(6) Answering these lingering questions is a topic for future research.

讨论部分的这些句子和引言部分陈述已有文献的语句一样：它们有时候很无趣，部分是因为它们关注的是研究本身，而非该研究关注的问题。与它们相反，结尾的句子应当令人印象深刻，这个结尾在读者脑海中留下的信息会让他们相信，花时间阅读你的文章是值得的。

要想写出强有力的结尾，首先需要鉴别出重要信息，并用一种生动的形式来表达。常用的办法你已经学过，就是在引言部分你用来吸引读者注意力的那些方法。在第 5 讲中我们提到了一些吸引读者注意力的方式：描述一种人们熟悉且有趣的行为、运用修辞疑问句，以及描述有趣的或能够吸引眼球统计数据或者事实。这些方法都是营造强有力结尾的基础。坦白说，选择这些方法的标准就是它能否营造出强有力的结尾。例如，以下三个句子或段落是第 5 讲中分别运用了人们熟悉且有趣的行为、修辞疑问句和描述有趣的或能吸引眼球数据这三种方法的例子：

(7) When people enter a building, others often hold the door for them. Although such interactions are commonplace, we know little about forms of social interaction like these that involve physical cooperation.

(8) Suppose you want to buy a new camera. Would you prefer to shop at a store that has three cameras in your price range or a store that has twelve? Research on choice overload suggests you will prefer the store with more choices but be less satisfied with a camera purchased there (Harris, Becker, & Hall, 2010).

(9) Less than 10 percent of the world's population reads English, yet most research on reading has involved English-speaking readers (Olsen & Nagy, 2012); this is potentially problematic because English is an unusual language in that spellings and sounds are not linked consistently (Moreau, Horvat, Mertens,& Gruber, 2008).

要想写一段强有力的结尾，首先需要回到引言部分那些吸引读者注意力的内容，从你的研究发现的角度来更新这些内容。例如，假设例句 7 中的研究表明，与单人相比，当有两人尾随其后时，人们扶住门的时间越长。例句 10a 通过引用引言部分的方法强调了你希望读者了解的重要信息，这样的结尾就是强有力的。

(10a) Thus, the present findings highlight the role of shared effect in driving physical cooperation, and they lead to some practical advice: If you want the door held for you as you enter a building，arrive with a friend, not alone.

例句 11 举例说明了段落 8 中吸引读者注意力的方法：

(11) The work reported here confirms that choice overload affects evaluation of luxury goods just as it affects evaluations of trinkets used in most previous work. And the results lead to a strong recommendation for consumers: You'll be happier with your new camera (or car or fancy watch) if you just consider a few of the models that fit your needs, not all of them.

练习 7.4

用练习 5.1 或者 111 页推荐的方法来写一段结尾。对第一项研究，假设结论是“对负面事件的回忆相比正面事件的更加精确”。我们更多能精确地回忆起负面事件。对于第二项研究，假设异质群体更难形成、更难以管理（这一研究结果证实了以往研究的发现），并且相比同质群体绩效更低（这是本研究的新发现）。

为了强调那些你希望读者记住的结论，可以考虑使用第 2 讲提到的强调技巧：使用 if、there 以及 what 把注意力放到句子的末尾，使用 not only X but Y 来强调新的发现。说实话，我不太倾向于使用 it 或者 there，因为它们太常见，因此其强调语气显得比较薄弱。但就像例句 10b 中呈现的那样，文章的结尾是使用 what 的好地方。

（10b） Thus, what stands out in this work is the role of shared effort in driving physical cooperation; and the work leads to some practical advice…

如果以往的研究发现躯体协作中动作的内部模型，但是新的研究发现是共享作用，那么你可以像例句 10c 那样使用 not only X but Y 来表达。

（10c） Thus, the present findings indicate that not only internal models of action but shared effort drive physical cooperation; and the findings lead to some practical advice…

你甚至可以像例句 10d 那样，把 what 以及 not only X but Y 结合起来运用：

（10d） Thus, what stands out in the present work is that not only internal models of action but shared effort drive physical cooperation; and the findings lead to some practical advice…

为了强调你的重要信息，另外一种可行的方法是使用掉尾句[1]。我之前没有提到这类句子，是因为它们容易过犹不及，因此对于常规的强调来说是不合适的。但是用它们来结束一篇文章是一种巧妙的方法。

掉尾句有两项基本的组成要素：首先是一个比平常要长的引导句——也就是在第 1 讲里面我力劝你避免使用的那些句子。另一个要素是一个在引导句中被多次重复使用的词语。段落 12 举例说明了典型的掉尾句：

（12） With malice toward none; with charity for all; with firmness in the right…let us strive on to finish the work we are in [and] to bind up the nation’s wounds.

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[1] 掉尾句是指中心意思放在句尾的句子。这种句子结构通常比把中心意思放在句首，修饰语放在句尾的结构效果更好。作修饰语的成分，可以是词组，如介词词组和分词词组等；可以是状语从句，如条件状语从句、让步状语从句或时间、地点状语从句等；也可以是其他结构，如不定式结构等。因而要读完全句才能了解该句完整含义的句子结构，从语法上看，掉尾句是一个不可分割的语言单位。通俗地讲，“掉尾”即“吊胃口”，制造“悬念”，起到引人入胜、发人深思的作用。——译者注

这句话摘自亚伯拉罕·林肯的第二次就职演说，它以一个长段引导句作为开始，其中 with 被重复使用了三次，句子的长度以及 with 的重复使用都吸引了读者的注意力。

在讨论部分，运用掉尾句来总结你的发现以及重申重要结论是一种很好的方法。也就是说，用一个长段引导句来呈现你的研究发现，在简洁的主句里面重申你的结论，就像例句 13 那样：

（13）Given that children who read normally typically have greater phonological awareness than do children with reading impairments, given that children's phonological awareness predicts their reading skill later in development, and given that children's reading improves after training in phonological awareness, we conclude that phonological awareness is an essential prerequisite for mastering reading.

这一段话中，作者用了由 40 个词组成的引导句来总结研究发现，每一个研究发现都以 given 作为引导词，由 12 个词组成的主句则呈现了根据研究发现得出的结论。在掉尾句中，还有一些词可以用来重复使用，例如 because、when 或者 considering，你可以用这些词来引导支持结论的那一些研究发现。

最后，如果你愿全力以赴，那么此时就能像第 3 讲第二部分中描述的那样，让你的文章结束得铿锵有力。无论何时出现，修辞疑问句（比如隐喻、倒复法）与新词法都能够吸引读者的注意力，因此你可以根据文章的需要来适当地运用这些手法以结束讨论部分。例如，例句 14 说明了如何使用倒复法来强调研究发现，这一研究是关于攻击性青少年的面部表情识别训练。

（14）When aggressive adolescents recognize anger in a face, they are better able to face their own anger.

例句 15 展示了如何通过增加后缀来创造新词，以达到增亮文章结尾的目的。

（15）What stands out in each study is that boys and girls are equally

likely to excel on math problems; thus, boys and girls are equally capable of becoming mathaholics.

在这一讲中，我们介绍了运用引言部分中吸引读者注意力的方法以及强调的技巧，通过结合使用这些技巧来提升写作，可以让你的文章结尾耳目一新。这样的结尾，再加上一个吸引人的引言和充满了强烈的故事主线的结果，可以使读者认为你的文章非常精彩，并且值得一读。

练习 7.5

运用第 2 讲中的强调和 / 或第 3 讲中的使句子生动的技巧来升华你在练习 7.4 中写出的结论。

小结

1. 避免出现讨论部分常犯的错误，包括篇幅太长、结构凌乱、缺乏深入讨论、偏题太远、语气不当，以及过度自夸。
2. 要想有效地组织讨论部分，首先要以引导段落（回顾研究发现以及讨论部分的其他内容）开头，然后写研究的局限、与研究所特有的问题以及启示这几个部分。
3. 通过运用强调的技巧使你的文章在结束的时候掷地有声。

课后练习

1. 浏览一些文章的讨论部分，鉴别它们是否出现了 105—107 页描述的那 6 个常见问题。
2. 找一篇讨论部分没有副标题的文章，用这一讲中建议的模板进行修订。
3. 找一篇结尾软弱无力的文章，把它的结尾部分修改得强而有力。

练习答案

练习 7.1

以下句子有自夸的倾向，具有自夸意味的词汇已用斜体显示。

1. The *results reported here are rich* in their implications for the literature on metacogniton.
2. This study is the *first attempt* to determine whether the absence of green space in a person's environment is linked to symptoms of anxiety and depression.
3. Other research has shown the effect of context on decision making; the *groundbreaking contribution of the present experiment* is in demonstrating that this effect is a by–product of basic cognitive processes.
4. This finding *is particularly valuable* in suggesting that discrete emotions are rooted in feelings of arousal.

练习 7.2

Study 1: One limiting condition would be the possibility that the positive and negative emotions associated with winning and losing in sports may not compare with those of other kinds of events (e.g., the joy of a wedding vs. the sadness of a divorce). A study–specific issue would be the mechanisms that make negative events more memorable than positive events.

Study 2: One limiting condition would be the use of college students; would the finding hold for the population at large? The most important study-specific issue would concern links among stress, negative affect, and depressive symptoms.

练习 7.3

1. The present findings indicate that negative events are remembered more accurately than positive ones: For sports fans, the agony of defeat is more memorable than the thrill of victory.
2. In the present work, relatively heterogeneous groups were less productive than homogeneous groups. Consequently, if you want to be a productive scientist, you would be better off joining a relatively homogeneous group.

练习 7.4

1. What emerges consistently in this work is that negative events are remembered more accurately than positive one: For sports fans, the memories you lose over time are not the memories of when you

lose.

2. Thus, given the evidence that heterogeneous groups are not only more difficult to form and more challenging to manage but are less productive, if you want to have a publish-but-not-perish career, you should join a relatively homogeneous group.

附录 1

投稿问与答

现在你已经写好文章，差不多要投稿了。这个时候，你要做的第一件事就是去问问你同学或同事的意见。至少你应该让一个不熟悉你研究领域的人给你提一些意见。他们更不容易受你的影响，因此可以找出你文章中的问题。

你准备好了最后的版本，可以投稿了，也就是你要在期刊的网站上上传你的文章了。在这部分，我将回答新手在投稿中经常会问的一些问题。

1. 我已经投入了几个月的精力来完成我的学位论文，是不是我稍微修改一下格式就可以投稿了？

不是！学位论文与投稿论文目的是不一样的[1]。学位论文是为了证明你达到了博士学位的水平。而投稿论文的目的是为某个大的研究领域增加新的研究结果。由于目的不同，学位论文通常比较长，可能会包含一些不是那么重要的实验，如那些没有像预期一样起作

[1] 学位论文一般包括几个章节的内容，例如，引言、文献综述和几个实验的介绍。许多学校会让学生用一篇学位论文发一系列的文章，我的建议是不要只稍微改一下格式就投稿。

用的实验或只是为论文重要部分做铺垫的实验。此外，学位论文还会包含一些没那么显著的结果。

这些特点会让有经验的编辑很快认出某一篇文章是来源于某篇学位论文。因此，你在投稿之前，需要彻底修改你的学位论文。第一步你需要把引言改短一点，你不需要向读者炫耀你对这个领域的所有文献的掌握情况，这个只有答辩委员会的老师才会关心。相反，你只需要提供你的研究合理的依据就行了（见第 5 讲）。此外，你不需要报告你的前期研究，只需要报告你的主要实验。这些前期研究可能对你来说很重要，但是读者只关心你的研究中那些最有价值的发现。

2. 我已经写好了文章，准备投稿了，我如何选择要投的期刊呢？

你应该考虑以下几个因素：首先，看看与你文章主题一样的其他文章都是发在哪些期刊上，也许其中很多文章你都已经引用了。第二，查看一下期刊的编委成员中有没有你这个主题的专家。如果你投这个期刊的话，你可以咨询那个编辑。但是有时候由于你可能会与他有利益冲突，也会适得其反。例如，你的研究是在批判他的研究，或是你的研究非常支持他的研究。第三，查看一下期刊的影响因子[1]，它可以用于衡量某个期刊对这个领域的影响力。评估一下你的研究发现是不是令人惊讶的，如果是的话，那你的文章可能值得发表在具有很高影响因子的顶尖期刊上。当然，新手一般很难正确评估他们的研究发现的影响力，这个还是需要经验。在你没有这种经验之前，你可以请有经验的同事帮你评估一下你的研究发现是值得发在顶尖的期刊还是中等期刊上。事实上，你偶尔在一些影响因子比较低的期刊上发表文章也没什么错。但是如果你总是在这

[1] 影响因子（Impact Factor，IF）是美国·ISI（科学信息研究所）的 JCR（期刊引证报告）中的一项数据。即某期刊前两年发表的论文在这两年中被引用总次数除以该期刊在这两年内发表的论文总数。这是一个国际上通行的期刊评价指标。影响因子现已成为国际上通用的期刊评价指标，它不仅是一种测度期刊有用性和显示度的指标，而且也是测度期刊的学术水平，乃至论文质量的重要指标。影响因子是一个相对统计量。

些影响因子比较低的期刊上发文章，而从来没有在比较好的期刊上发文章的话，你会给人一种你没有做过比较好的研究的印象。

3. 期刊的网站上一般会让作者推荐一些审稿人，给他们罗列一串审稿人名单真的好吗?

是的，你必须这么做。作者一般比较熟悉自己领域的研究者，编辑一般会采纳他们的意见。当然，由于你推荐的审稿人可能最近刚给这个期刊审稿了，或者编辑发现他们在之前的审稿过程中并不是特别配合，因此编辑不会总是用你推荐的审稿人。

当你在列举推荐的审稿人时，你必须确保没有列举那些与你有利益关联的人，比如你的导师或学生、同事，或者近五年的合作者。任何对你有利的人，哪怕只有一点点，你也不应该列举他们。如果你列举了那些人，只会让编辑觉得你对审稿还不了解，或者你想通过他们来暗箱操作审稿流程。

期刊一般会让你列举一些需要避讳的审稿人，你大可以列举上一些你害怕对你的文章有偏见的人。但是不要超过两到三个，否则会让编辑觉得你在试图使备选的审稿人来自偏向你的一方。当然，有时候你的文章里面写的东西可能与这个领域主流思想相违背。如果是这种情况的话，你最好给编辑写封信说明情况，而不是列举大量需要避讳的审稿人。

4. 如果编辑让我修改我的稿件，但是我对有些修改意见不是很明白，或者我不同意一些修改意见的话，我是否应该与编辑联系?

当然要。当编辑让你修改的时候，就是希望你能够按照审稿人的意见修改。如果你不能理解这些修改意见的话，你需要给编辑发邮件。你最好是在收到邮件的 7 ~ 10 天内就发邮件，因为编辑就不用再重新思考这些修改意见了。如果你不理解部分修改意见的话，大部分编辑可能更倾向于你发邮件去问，而不是收到了一份没有按照修改意见修改的稿件。不要期望编辑会帮你理解每一个修改意见。他们可不想做你的合作者，许多编辑都不愿意在你反馈修改稿之前帮你审查。

5. 为什么文章会被拒呢？

文章被拒可能有以下几个原因：（1）你的研究方法存在问题，因此不能解决你所提出来的问题。（2）你的结果太弱了，以致你得出错误的结论。其中典型情况就是你有许多预期结果不显著。（3）你的研究没有新颖性。编辑想要发表具有一些令人兴奋的新发现的文章，而不是在重复检验同一个效应。就算你换一个角度写，顶多就像写了一首有趣的歌，但是绝不是一篇令人兴奋的文章。

6. 如果我认为审稿人的评审意见不对或带有很强的偏见，不应该拒我的文章，我是否应该为我的文章写信反驳呢？

这要视情况而定，如果满足以下两个条件的话，你的上诉应该是合理的。首先，需要证明审稿人的审稿意见有问题，而且不应该只是你不同意的那部分审稿意见。比如说，审稿人错误地引用文献（如某研究表明 X，其实应该是表明 Y），或错误地建议你使用一些确实不合适的分析方法。第二，认真阅读编辑的最终决定邮件，确认是否是审稿人错误的审稿意见导致了编辑最终决定。换句话说就是，审稿人会犯错误，但是如果他的错误并不是导致编辑拒你文章的原因，那你就不应该写信反驳了。

如果你决定要给编辑部写信，绝不要直接这样做。至少你需要等 48 个小时以后，好让那些在你听到拒稿时的愤怒情绪消散。但是你最晚应该在一个星期之内写信反驳，因为这样编辑对这个文章的意见还在脑子里，他们就不用去重新加工和构建审稿意见了。

7. 如果我的文章被拒了，我是否应该转投到另一个期刊呢？

也许吧。你应该先看看审稿意见。如果这篇文章的论证、方法或结果有很大漏洞的话，那你就不用白费心机投到另一家期刊了。因为另一家期刊的审稿人也会看到同样的问题，这样你是在浪费大家的时间。但是，如果你的文章被拒只是因为写得没有新意或者没有坚实的证据来支持你的假设的话，也许你应该投一家你之前没有选择的期刊。如果你的文章接二连三地被拒，那你应该接受这样一个事实：你的文章是不值得被发表的。采纳审稿人的意见，改进你的研究，写一个更好的故事再进行投稿。

附录 2

如何写标题、摘要和方法部分

第 5 讲到第 7 讲主要关注的是文章的引言、结果和讨论三个部分。读者通过这三个部分来评价你的研究。审稿人也是根据这几个部分的内容决定接收你的文章还是拒稿。相反，标题、摘要和方法部分在审稿过程中，对你的文章的命运影响相对较小。有时候审稿人可能会让作者把方法部分再写清楚一点，或者建议作者换一个标题，但是在我的记忆里，没有一个审稿人会给出这样的审稿意见："由于这篇文章的标题太差了，所以建议拒稿"，又或者是："由于这篇文章的方法部分写得很好，所以应该接收这篇文章。"

很多介绍 APA 格式的书都向学生介绍如何写标题、摘要和方法部分。坦白说，关于这三个部分我也没有什么可多说的。以下是针对这三个部分的一些简单但我觉得比较重要的写作意见。

1. 标题

标题是读者首先看到的部分，它决定了你的文章是如何被互联网搜索引擎检索。所以，标题是值得你花上一些时间来构思的，它应该准确地表达你的研究及中心思想。我建议你避免以下几种标题:

◇ 标题不要卖萌或抖机灵：作者有时候会在一个听起来比较科学的词组后面接一些歌名、电视节目，或者是主流文化。这种做法的问题就在于主流文化是随地理位置和时间变化的。一个典型的例子就是，一个国家的主流文化在另一个国家或者另一个时期，可能完全没有任何意义。如果你想给读者呈现一个非科学的词组，谚语会是更好的选择，如“A bird in the hand is better than two in the bush”。因为谚语是被时间证明了的，此外，它们具有跨文化一致性。

◇标题里面包括“preliminary”：有些作者认为他们如果在标题里面使用了“preliminary”，可以让编辑和审稿人用比较低的标准来评价他们的文章。对此我感到怀疑。如果一个研究真的是前期探索性的研究，比如说被试样本量太少的话，你可以针对这个问题再设计一个研究，而不是试图要发表这个前期的研究发现。

◇这样形式的标题“the effects of the independent variable on the dependent variable”：至少在美国，本科生经常会使用这样的标题，如果你用这种形式的标题会让你的研究看上去平淡无奇。更重要的是，心理学家一般对具体的变量本身不感兴趣。相反，他们对变量在行为、认知和情绪上的影响更感兴趣。

除上面几种标题，我比较喜欢描述研究结果的标题。根据我以往的审稿经验，给你们呈现两个例子，“Longitudinal evidence that increases in processing speed and working memory enhance children's reasoning”和“Processing time decreases globally at an exponential rate during childhood and adolescence”。这两个标题都非常简明地概括了文章中的主要发现。

当然，有时候研究结果比较复杂，以致无法使用一个简短的句子来概括。这种情况下，我建议你使用包括你的研究中关键概念的标题。例如，“Linking emotions, social support, and health”和“The role of the medial temporal lobe in memory aging”。

你不必花费几个小时来完善你的标题（例如花很多时间找一个

理想的谚语），但是它也不应该只随便想一想就定下来。一个好的标题会吸引读者，同时还可以增加被检索的可能性，这些都会提高你文章的学术影响力。

2. 摘要

一个好的标题可以吸引读者的注意力，而一个好的摘要可以起到保持他们注意力的作用。在 APA 格式中，摘要一般是一段话，其中分别用一到两句话来介绍研究背景或研究问题、假设、方法、结果和结论。关于摘要的写作，我有以下建议：

◇摘要里每个部分，如研究背景、方法等，各用两到三句话来描述，然后根据第 3 讲里的方法，将它们压缩到规定的字数之内。

◇确保你的写作是清晰的，没有语法和拼写错误，尤其是你的研究结果为什么可以推动该研究领域。

◇摘要放在最后写，写到最后你才知道你的文章实际上是在说什么。

3. 方法

方法部分是用来描述你的研究是如何做的，要细节到别人可以重复你的研究。写方法部分时，你要很直接，并且介绍所有的细节。这一部分创作空间最小，最少使用在这本书中前面提到的修辞技巧。正因为这样，我一般是在写文章的其他更重要部分遇到困难时，才写方法部分。在写这一部分内容时，我强烈建议你需要做到以下几点：

◇尽量使用副标题，以 Participants 和 Procedure 开始，有必要时可以增加其他部分。

◇避免使用缩写，考虑使用描述实验条件的短语或变量名。

◇尽量多提供一些被试信息。例如，不要只是这样写“We tested 36 college students”。

◇描述被试在研究中干了什么时，不要说他们被要求干了什么。例如，不要这样写“Participants were then asked to complete a

questionnaire...”，而应该改成“Participants then completed a questionnaire...”。

◇在期刊网站上上传所有材料，如刺激物、问卷等，这些材料可以作为附件发表在网络上。

术语表

倒复法（Antimetabole）：一种修辞手法，在句子中用重复性的词语和相反的顺序来表达强调。

These findings indicate that when people love to cheat, they may cheat on those they love.

从句（Dependent clause）：一组包含了主语和动词但是不能单独作为一个完整的句子而存在的词组，通常也被称作副句。

Although these results contradict previous findings in the literature, our view is that the contradiction is more apparent than real.

委婉词（Hedge）：一个用以表达谨慎语气的词（通常是副词、形容词或者动词）。

This evidence *seems* to lead to the conclusion that...

夸张（Hyperbole）：一种修辞手法，用夸张的陈述来表达强调语气；因为读者可能从字面上进行直译，所以不建议在科学写作中使用。

The literature on face perception is filled with billions of studies.

独立子句（Independent clause）：一组包含了主语和动词并且可以单独作为一个完整的句子而存在的词组，通常也被称作主句。

Although these results contradict previous findings in the literature, *our view is that the contradiction is more apparent than real.*

强调词（Intensifier）：一个用以表达强调语气的词（通常是副词、形容词或者动词）。

This evidence *clearly* leads to the conclusion that...

隐喻（Metaphor）：一种修辞手法，用两个相似的物体作暗喻。

For individuals who are depressed, occasional happy experiences *drown in a sea of negative effect.*

名词化（Nominalization）：由动词或者形容词衍生而来的名词。

significance 源自形容词 significant，personification 源自动词 personify。

非限制性从句（Nonrestrictive clause）：不会改变它所修饰的名词或名词词组含义的独立子句，通常也被称作非限制性定语从句。

The variables studied here, *which included IQ and interests*, predicted recall and metacognitive scores.

名词短语（Noun phrase）：一组包含了一个名词或者代词的词组，它们合在一起作名词（例如：作为句子的主语或者宾语）。

exogenous spatial attention（exogenous 与 spatial 是形容词，attention 是名词）

被动语态（Passive voice）：一种语法结构，句子的主语是名词，该名词可以作为一个主动语态句子的宾语。

Longitudinal studies have been conducted by scientists to determine whether...（名词短语 longitudinal studies 是动词 have been conducted 的宾语）

介词短语（Prepositional phrase）：以介词开头、名词或者代词结尾

的一组词。

Training ended *after the first errorless trial*.

关系代词（Relative pronoun）：一个用以引导从句的代词，例如 that、which、who、whom 以及 whose.

This finding was unexpected and suggests *that* previous findings may be spurious.

限制性从句（Restrictive clause）：能够改变它所修饰的名词或名词词组含义的独立子句，通常也被称作限制性定语从句 。

The variables *that predicted recall accuracy* also predicted metacognitive scores.

概括性修饰语（Resumptive modifier）：以重复主句关键词的从句作为开始的修饰符（通常是一个名词），这是一种写长句的方法。

Couples experience conflicts when they do not agree on relationship goals, *conflicts* that can drain their resources for solving other problems.

比喻（Simile）：一种修辞手法，两个相似的物体通过 like 或者 as 作明喻。

On tapping tasks, young children's pace is variable, *like a broken metronome*.

总结性修饰语（Summative modifier）：以总结主句含义的单词（通常是一个名词）来引导从句作为开始的修饰符，这也是一种写长句的方法。

In both experiments, children ate more healthily after they learned about the nutritional value of food, a *finding* that has implications for theories of cognitive development and for intervention to promote healthy eating.

主题句（Topic sentence）：通常是段落的首句，通过介绍一个主题和主题相关的中心思想来引入整个段落的含义。

Individuals with low self-control are more likely to make sacrifices for their spouses and partners.（主题是：Individuals with low self-control；中心思想是：they are more likely to make sacrifices for their spouses and partners）

低调陈述（Understatement）：一种修辞手法，有意描述得比事实或条件准许的情形更弱；由于读者可能从字面上进行直译，所以不建议在科学写作中使用。

People recalled pictures somewhat more accurately than words（when in fact they recalled 90 percent of pictures but only 10 percent of words）.

动词词组（Verb phrase）：包含一个主要动词以及一个或者更多助动词的词组。

Many scientists have reported findings...（reported 是主要的动词，have 是助动词）

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